

Occupational downgrading of Venezuelan migrants in Colombia: Do stay permits improve occupational mobility?

3rd JDC Research Conference on Forced Displacement

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May 17, 2024

Motivation

- Integration into the labor market extends beyond merely reducing the unemployment rate or the wage gaps of migrants. In the medium term, decreasing the misallocation of human capital can yield productivity gains.
- However, migrants face significant **barriers to entering the labor market**: language, discrimination, xenophobia, lack of networks, lack of recognition of professional qualifications and work experience, and institutional and **legal restrictions**, among others that have been identified (see [Danzer and Dietz, 2014](#); [Meczyński, 2016](#); [Liu et al., 2019](#); [Schuster et al., 2013](#); [Ramboarison-Lalao et al., 2012](#))
 - ▶ Skilled migrants take positions that are below their qualifications and experience (**occupational downgrading**)
- Work permits are an effort to integrate migrants into the labor market!
- **How do work permits help reduce occupational downgrading?**

In a nutshell

Objective

We assess the impact of holding a work permit on the occupational transition patterns of Venezuelan migrants in Colombia.

Methodology

By utilizing novel data on migrants in Colombia, we employ an extended version of the Difference-in-Difference (DID) identification strategy that incorporates Inverse Probability Weighting (IPW) to address endogeneity concerns.

Results

- 1 Work permits increase (decrease) the likelihood of being employed (out of the labor force), for those who used to be unemployed in Venezuela.
- 2 There are heterogeneous effects across gender and age groups.
- 3 Work permits are related to access to more routine jobs (mainly for the male and young population).

Literature

- Skills can generate lower returns due to **limited information** about the functioning of the total labor market (Martín et al., 2016; Fellini and Guetto, 2019; OCDE, 2020).
- Migrants face a period of adaptation mainly in the absence of a pre-organized job (Brell et al., 2020; Fasani et al., 2022) (\simeq assimilation argument: occupation level improves as they accumulate human capital (Simón et al., 2014; Nikolov et al., 2022; Duleep et al., 2022; Barbiano di Belgiojoso, 2019))
- How is occupational downgrading measured?
 - ▶ Education (Chiswick and Miller, 2009; Piracha et al., 2023)
 - ▶ Loss of occupational status (Crollard et al., 2012; Danzer and Dietz, 2014). For example: blue-collar and white-collar occupations (Waldendorf, 2021; Rosenfeld and Spenner, 1992; Fritsch et al., 2022)
 - ▶ Combining education and occupational status (Ganzeboom and Treiman, 1996)
 - ▶ Wages (Lombardo et al., 2021)

Context

Venezuelan migration

In 2014, the Venezuelan economy contracted dramatically, experiencing high inflation rates and shortages of essential goods. (Caruso et al., 2021; Ramoni Perazzi et al., 2017) → The massive migration of 5 million Venezuelans, with Colombia as the main host country hosting ≥ 2.5 million until 2022.

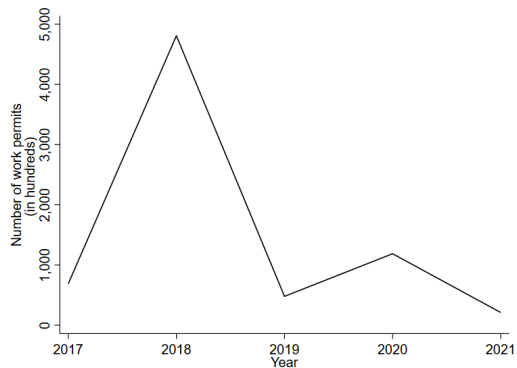
Work permits

In response to the massive migration, in 2017 the Colombian government launched *Permiso Especial de Permanencia* (PEP).

- Benefits: access to public services such as education, health, childcare, and access to the formal labor market.
- Requirements: Venezuelan nationality, entry into Colombia with a stamped passport (though this condition was dropped in August 2018), no criminal record, and no history of deportation.
- Renewable every 2 years.

Context

Figure: Total granted work permits in Colombia (2017-2021)



Notes: Data available until May 2021. Source: Own calculations, using the information provided by Migración Colombia

Data

We utilize information from the Migration Pulse Survey (EPM) conducted by DANE, which includes:

- A representative longitudinal survey that takes sample of migrants over 15 years old (from GEIH)
- We utilize data from the first four waves (July 2021 - April 2022), comprising 12,510 migrants (5,769 male migrants).
 - ▶ Employment status: “What activity did you spend most of your time doing last 7 days?” for Colombia; “What activity did you spend most of your time in Venezuela before coming to Colombia?” for Venezuela.
 - ▶ Employment quality: “What was your occupation at the job you were in last 7 days?” for Colombia; “What was your occupation in the last job in Venezuela before migrating?” for Venezuela.
 - ★ *White-collar job* [See ISCO-88 Codes](#)
 - ★ Routinization index
 - ▶ PEP holder: “Do you have PEP?” and “Since which year and month do you have it?” (We exclude returnees)
 - ▶ Individual characteristics

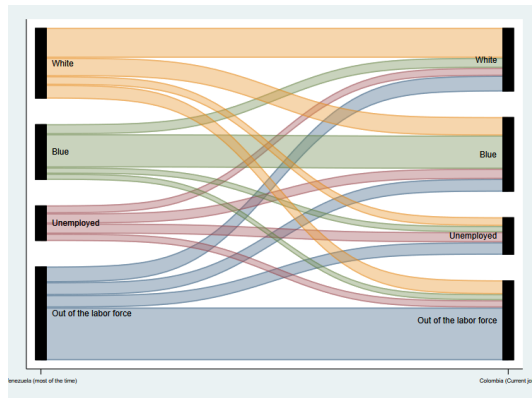
Table: Descriptive statistics

	WP (%)	No WP (%)
Employed	63.97	54.55
White-collar job	43.83	46.34
Unemployed	9.02	14.96
Out of the labor force	27.01	30.50
Female	44.84	50.58
Age \geq 34	44.86	40.75
Education \geq high school	28.86	17.19
Lives in urban areas	91.97	86.41
Average time in Colombia (years)	3.69	3.31
Migrated for family reasons	22.09	15.77
<i>N</i>	315,302	1,585,911

Notes: Source: Own calculations using EPM.

Descriptive statistics

Figure: Change of occupational status from Venezuela to Colombia



Notes: The left axis corresponds to the occupation in which the migrant worked most of the time in Venezuela. The right axis refers to the occupation of the current job in Colombia. For the former variable, we used answers from round 2 which has less missing data. Source: Own calculations using EPM data.

Identification strategy

DID

To control for unobservable, time-invariant components at the migrant level, a more precise measurement of occupational downgrading is exploited by comparing migrants' occupations between origin and destination

Problem: assignment of permits is not random → self-selection can lead to potential biases → making the assumption of parallel trends not valid

Solution: DID+IPW

We incorporate measures of the inverse of the probability that a migrant holds work permits conditional to the set of control variables and enhance the validity of causal inferences by addressing issues of selection bias and improving covariate balance between comparison groups

Identification strategy

To evaluate the effect of work permits on the occupational downgrading and employment status of migrants, we use an extended version of DID that incorporates and Inverse Probability Weighting (IPW):

$$Y_{idt} = \alpha + \beta_1 WP_i \times T_t + \beta_2 WP_i + \beta_3 T_t + \gamma_d + \delta' X_{idt} + \epsilon_{idt}$$

where i stands for the individual, d for the department (equivalent to State in the U.S.), and t for a year.

- Y is the labor market status (employed, unemployed, out of the labor force) or occupation type (white-collar job)
- WP equals 1 if the individual holds a work permit and zero otherwise.
- T equals 1 for any observation corresponding to the host country; zero if the migrant was in Venezuela.
- X_{idt} is a vector of individual characteristics (gender, age, education, urban, time in the host country, and whether the individual migrated for family reasons).
- γ_d are department fixed effects. ϵ_{idt} is the error term.

Identification strategy

To assess the impact of work permits on the routinization of the occupations of migrants, on the following equation we estimate the latter equation but using a routine task-intensity (RTI) index as the outcomes of interest.

$$RTI_{idt} = \alpha + \beta_1 WP_i \times T_t + \beta_2 WP_i + \beta_3 T_t + \gamma_d + \delta' X_{idt} + \epsilon_{idt}$$

$$RTI_k = RC_k + RM_k - NRA_k - NRI_k - NRM_k$$

Where RTI is the routine task intensity of occupation k , RC is the routine cognitive intensity, RM is the routine manual, NRA is the non-routine analytic, NRI is the non-routine interactive and NRM is the non-routine manual. Note that RTI increases as the routine cognitive and manual intensity increases and decreases when the NRA, NRI, and NRM increase.

Impact of WP on labor market outcomes

Table: Impact of work permits on labor market outcomes of migrants

Variables	(1) Employed	(2) White-collar job	(3) Unemployed	(4) Out of the labor force
Panel A. Migrants who were <i>white-collar</i> in Venezuela				
WP × T	0.023 (0.026)	-0.029 (0.035)	0.015 (0.014)	-0.038 (0.027)
Observations	2,836	2,217	2,836	2,836
R-squared	0.243	0.358	0.082	0.198
Panel B. Migrants who were <i>blue-collar</i> in Venezuela				
WP × T	0.037 (0.047)	0.010 (0.058)	-0.005 (0.025)	-0.032 (0.045)
Observations	2,082	1,711	2,082	2,082
R-squared	0.201	0.220	0.092	0.193

Notes: The sample of these estimates corresponds to the migrants who had the occupational status indicated in the title. The estimates include the same controls described in Equation 11. Clustered standard errors at the department level are reported in parentheses. *** significant at the 1%, ** significant at the 5%, * significant at the 10%. Source: Authors' calculations using EPM.

Impact of WP on labor market outcomes

Table: Impact of work permits on labor market outcomes of migrants

Variables	(1) Employed	(2) White-collar job	(3) Unemployed	(4) Out of the labor force
Panel C. Migrants who were unemployed in Venezuela				
WP × T	0.141*	-0.090	-0.021	-0.120**
	(0.075)	(0.080)	(0.034)	(0.049)
Observations	938	699	938	938
R-squared	0.581	0.440	0.784	0.230
Panel D. Migrants who were out of the labor force in Venezuela				
WP × T	0.053	-0.017	-0.021	-0.032
	(0.041)	(0.088)	(0.029)	(0.033)
Observations	3,276	2,088	3,276	3,276
R-squared	0.322	0.565	0.087	0.409

Notes: The sample of these estimates corresponds to the migrants who had the occupational status indicated in the title. The estimates include the same controls described in Equation 11. Clustered standard errors at the department level are reported in parentheses. *** significant at the 1%, ** significant at the 5%, * significant at the 10%. Source: Authors' calculations using EPM.

Heterogeneous impact of WP on labor market outcomes

White collar in Venezuela

- Young: (-) 5 pp of being out of labor the force

Blue collar in Venezuela

- Female: (-) 18.3 pp of work in a *white-collar* job
- Male: (-) 4.2 pp of being out of the labor force
- Young: (-) 6.7 pp of being unemployed

Unemployed in Venezuela

- Female: (-) 18 pp of being out of the labor force
- Male: (+) 9.9 pp of being employed
- Young: (+) 17.6 pp of being unemployed ; (-) 17.5 of being out of the labor force

Out of the labor force in Venezuela

- Female: (-) 7.5 pp of being out of the labor force
- Male: (-) 8.2 pp of being unemployed
- Old: (+) 14.8 pp of being unemployed ; (-) 13.5 of being out of the labor force

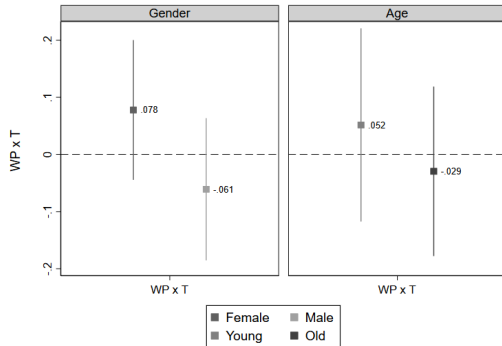
Potential mechanisms

Table: Mechanisms explaining the impact of work permits

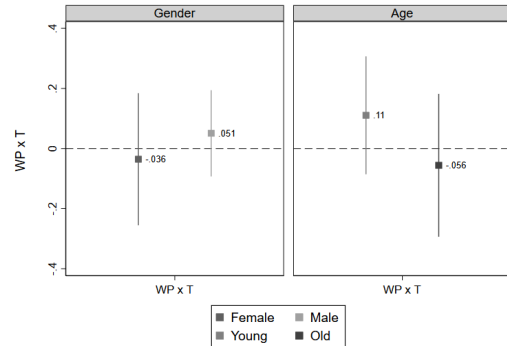
Variables	Difficulty finding a job	Information on formal jobs	Formal job seeking mechanism	Work in street	Work in online apps	Employer was a friend	Job training	Title homologation	Identify with colombian culture
WP	-0.027 (0.019)	0.045*** (0.015)	0.140 (0.129)	-0.039** (0.019)	0.002 (0.006)	-0.008 (0.013)	0.022** (0.009)	-0.008 (0.015)	0.026* (0.016)
Constant	0.626*** (0.077)	0.450*** (0.066)	1.973*** (0.530)	0.089 (0.091)	-0.007 (0.028)	0.167** (0.066)	-0.022 (0.037)	-0.062 (0.103)	0.728*** (0.068)
Observations	6,495	3,682	3,456	3,456	3,454	3,441	8,914	3,507	4,680
R-squared	0.065	0.247	0.082	0.064	0.042	0.046	0.041	0.085	0.142

Notes: The estimates include the same controls described in Equation 11. Clustered standard errors at the department level are reported in parentheses. *** significant at the 1%, ** significant at the 5%, * significant at the 10%. *Source:* Authors' calculations using EPM.

Impact of WP on Routinization Index



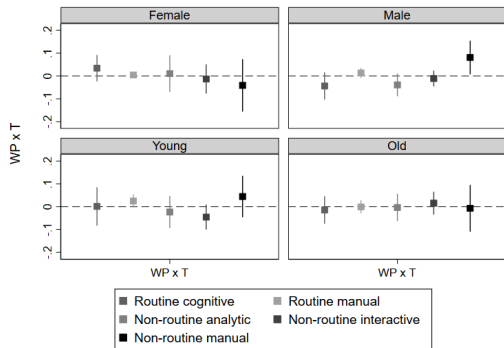
(a) *White-collar job in Venezuela*



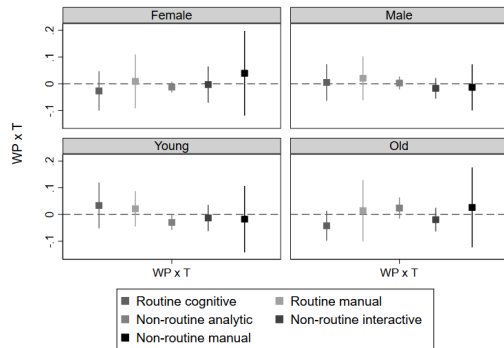
(b) *Blue-collar job in Venezuela*

Figure: Impact of work permit on RTI

Impact of WP on Routinization Index (disaggregated)



(a) *White-collar* job in Venezuela



(b) *Blue-collar* job in Venezuela

Figure: Impact of work permit on the five components of RTI

Conclusions and comments

- 1 Work permits facilitate women and the youngest to improve (at least not getting worst) their labor market outcomes.
 - ▶ WP decreased the probability of being out of the labor force for female migrants in white-collar, unemployed, or out of the labor force in Venezuela.
 - ▶ WP increase the probability of being employed for those migrants below 34 years old who used to be unemployed in Venezuela.
- 2 Work permits also improve access to formal job search channels and enhance migrants' adaptation to the local culture.
- 3 Permits decrease the routinization of jobs of male migrants who used to be white-collar in Venezuela
- 4 Items promote employment but neither reduce or exacerbate occupation downgrading: impact of the permits may be limited and requires other mechanisms to improve matching with employment
→ improving knowledge of the local labor market or encouraging the accumulation of high-demand skills

ISCO-88

Go back

- 1 Legislators, senior officials, and managers
- 2 Professionals
- 3 Technicians and associate professionals
- 4 Clerks
- 5 Service workers and shop and market sales workers
- 6 Skilled agricultural and fishery workers
- 7 Craft and related trades workers
- 8 Plant and machine operators and assemblers
- 9 Elementary occupations
- 10 Armed forces

Heterogeneous impact

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Table: Heterogeneous impacts of work permits on labor market outcomes of migrants who had a *white-collar* job in Venezuela

Variables	Employed	Employed <i>White-collar</i>	Unemployed	Out of the labor force
Panel A. Female				
WP x T	0.048 (0.061)	0.009 (0.072)	0.027 (0.025)	-0.075 (0.053)
Observations	1,618	1,153	1,618	1,618
R-squared	0.326	0.284	0.115	0.253
Panel B. Male				
WP x T	-0.017 (0.034)	-0.058 (0.053)	-0.000 (0.030)	0.017 (0.019)
Observations	1,218	1,064	1,218	1,218
R-squared	0.118	0.434	0.099	0.087
Panel C. Age < 34 years old				
WP x T	0.034 (0.039)	-0.063 (0.056)	0.016 (0.026)	-0.050* (0.028)
Observations	1,364	1,082	1,364	1,364
R-squared	0.298	0.380	0.130	0.210
Panel D. Age ≥ 34 years old				
WP x T	0.015 (0.036)	0.004 (0.061)	0.013 (0.021)	-0.028 (0.042)
Observations	1,472	1,135	1,472	1,472
R-squared	0.237	0.384	0.101	0.214

Notes: The sample of these estimates corresponds to the migrants who had the occupational status indicated in the title. The estimates include the same controls described in Equation 11. Clustered standard errors at the department level are reported in parentheses. *** significant at the 1%, ** significant at the 5%, * significant at the 10%. *Source:*

Authors' calculations using EPM.

Heterogeneous impact

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Table: Heterogeneous impacts of work permits on labor market outcomes of migrants who had a *blue-collar job* in Venezuela

Variables	Employed	Employed White-collar	Unemployed	Out of the labor force
Panel A. Female				
WP x T	0.041 (0.115)	-0.183* (0.098)	-0.043 (0.029)	0.002 (0.103)
Observations	570	394	570	570
R-squared	0.382	0.463	0.157	0.353
Panel B. Male				
WP x T	0.033 (0.033)	0.052 (0.058)	0.008 (0.031)	-0.042*** (0.011)
Observations	1,512	1,317	1,512	1,512
R-squared	0.142	0.209	0.120	0.078
Panel C. Age < 34 years old				
WP x T	0.074 (0.051)	0.120 (0.075)	-0.067*** (0.023)	-0.007 (0.043)
Observations	924	785	924	924
R-squared	0.224	0.279	0.131	0.238
Panel D. Age ≥ 34 years old				
WP x T	0.002 (0.065)	-0.093 (0.071)	0.046 (0.043)	-0.047 (0.061)
Observations	1,158	926	1,158	1,158
R-squared	0.243	0.248	0.155	0.207

Notes: The sample of these estimates corresponds to the migrants who had the occupational status indicated in the title. The estimates include the same controls described in Equation 11. Clustered standard errors at the department level are reported in parentheses. *** significant at the 1%, ** significant at the 5%, * significant at the 10%. *Source:*

Authors' calculations using EPM.

Heterogeneous impact

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Table: Heterogeneous impacts of work permits on labor market outcomes of migrants who were *unemployed* in Venezuela

Variables	Employed	Employed <i>White-collar</i>	Unemployed	Out of the labor force
Panel A. Female				
WP x T	0.152 (0.129)	-0.091 (0.094)	0.028 (0.068)	-0.180* (0.089)
Observations	430	291	430	430
R-squared	0.463	0.606	0.821	0.334
Panel B. Male				
WP x T	0.099* (0.055)	-0.060 (0.107)	-0.061 (0.043)	-0.038 (0.030)
Observations	508	408	508	508
R-squared	0.701	0.396	0.777	0.119
Panel C. Age < 34 years old				
WP x T	0.176** (0.081)	-0.127 (0.139)	-0.001 (0.068)	-0.175*** (0.033)
Observations	572	423	572	572
R-squared	0.620	0.524	0.800	0.269
Panel D. Age ≥ 34 years old				
WP x T	0.107 (0.081)	-0.013 (0.095)	-0.048 (0.041)	-0.059 (0.091)
Observations	366	276	366	366
R-squared	0.588	0.464	0.800	0.260

Notes: The sample of these estimates corresponds to the migrants who had the occupational status indicated in the title. The estimates include the same controls described in Equation 11. Clustered standard errors at the department level are reported in parentheses. *** significant at the 1%, ** significant at the 5%, * significant at the 10%. *Source:*

Authors' calculations using EPM.

Heterogeneous impact

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Table: Heterogeneous impacts of work permits on labor market outcomes of migrants who were *out of the labor force* in Venezuela

Variables	Employed	Employed <i>White-collar</i>	Unemployed	Out of the labor force
Panel A. Female				
WP x T	0.074 (0.049)	-0.039 (0.064)	0.001 (0.032)	-0.075* (0.038)
Observations	2,392	1,496	2,392	2,392
R-squared	0.307	0.640	0.092	0.378
Panel B. Male				
WP x T	0.003 (0.088)	0.011 (0.181)	-0.082* (0.042)	0.079 (0.068)
Observations	884	592	884	884
R-squared	0.414	0.465	0.160	0.550
Panel C. Age < 34 years old				
WP x T	0.012 (0.045)	0.005 (0.127)	-0.026 (0.038)	0.014 (0.040)
Observations	2,388	1,541	2,388	2,388
R-squared	0.333	0.601	0.101	0.433
Panel D. Age ≥ 34 years old				
WP x T	0.148** (0.063)	-0.045 (0.113)	-0.013 (0.030)	-0.135** (0.063)
Observations	888	547	888	888
R-squared	0.357	0.544	0.115	0.418

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