The recovery of the labor force after the pandemic: An analysis of the heterogeneity between countries

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Abstract

After the pandemic, the "great resignation" happened in some countries, but it was not a global phenomenon. Labor participation behaved differently between countries during 2020-2021. Understanding the reasons behind these differences is important because of its implications for the economic cycle and long-term economic growth. Using panel regressions and data for close to 40 advanced and emerging economies up to the end of 2021, this paper attempts to understand the causes behind these differences. Mobility restrictions, the fear of getting infected and economic growth are important factors. Mobility restrictions were more relevant at the beginning of the pandemic and in countries with a high level of informality. Even though the economic recovery is one of the main factors, there were a lot of countries where the economic recovery was not accompanied by a similar recovery in labor participation. Part of the explanation may be due to the types and amounts of fiscal support implemented by governments. Countries that implemented job retention programs saw smaller declines and faster recoveries in the labor participation rate. Moreover, there is a negative association between the size of the fiscal aid and the recovery of labor participation.

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1. Introduction

The economic crisis that started with the Covid-19 pandemic caused huge disruptions in the labor market. The mobility and economic restrictions in 2020 and 2021 prevented a worse sanitary outcome but put a high burden in the livelihoods around the globe. Labor markets where strongly affected causing massive lay-off or furlough of workers around the world, but with significant heterogeneity between countries.

After the pandemic, the "great resignation" – that we are interpreting as the economic trend in which employees voluntarily resigned from their jobs and did not come back to the labor force – was not a global phenomenon. At the beginning of 2020, some countries had small declines in the labor participation rate, while others saw a decline higher than in previous crisis, including the global financial crisis. The subsequent recovery was also uneven across economies. These differences remain when comparing within advanced or emerging economies. Among advanced economies, the United States stands out as one in which the labor participation recovered more slowly. At the same time, the impact of the pandemic on labor participation was greater in Latin American countries than in other emerging economies.

Understanding the behavior of the labor participation after the Covid-19 pandemic is important because of its implications for the economic cycle and long-term economic growth. While there was a strong correlation between the recovery of employment and labor force participation across the globe, the relationship is not one-to-one. Moreover, there is no clear correlation between the recovery in labor participation and the economic recovery among economies. Some of them showed a synchronized recovery between GDP and labor participation while others recovered economically but people did not return to the labor force. Economies in which labor participation recovered more lagged due to permanent supply factors could suffer more persistent inflationary pressures. Moreover, differences in the recoveries of labor participation could also help to anticipate differences in the permanent scars that the pandemic has left. Past evidence suggests that labor supply can be stickier than what classical theories suggest [[Clark & Summers, 1982]]. Moreover, evidence from OECD countries point that a downturn in the economic cycle could have persistent effects on labor participation, especially in young and old population [[Duval et al, 2011]], which could affect potential growth.

There are different reasons that could explain the heterogeneity in the behavior of labor participation after the pandemic, factors that could be grouped in those that affect labor supply or labor demand. (i) During the pandemic, higher level of mobility restrictions and a greater damage generated by Covid-19 probably affected labor supply due to quarantine restrictions, home responsibilities, or because of the fear of getting infected. Mobility restrictions may have affected labor demand as well, given the inability of firms to produce. (ii) Although direct fiscal transfers to households were necessary to cope with the crisis for countless families, they could have discouraged or postpone the return to work, especially when it meant an important reserve income. (iii) Job retention policies, which made it possible to maintain labor relations when people were not working, prevented additional falls

in labor supply. Part of this effect is mechanical to the extent that protected employment relationships remained categorized as employment, but it could also reflect the positive effect of avoiding a costly search process that can disincentive many dislocated workers. (iv) Elderly workers may have advanced their retirement due to higher exposure to the pandemic and the strong increase in their wealth. (v) Finally, countries with greater economic recovery and, therefore, a more vigorous labor demand, should have encouraged a faster return of workers to the labor force.

Until now, most studies that analyze labor market reactions to the pandemic are single country analysis and have been done mostly for advanced economies. In this paper, we analyze the relevance of the aforementioned factors through panel estimations using quarterly data from the beginning of the pandemic and the end of 2021 for close to forty advanced and emerging economies.

The results suggest that mobility restrictions, the fear of getting infected and the economic recovery are relevant factors to explain the differences in the behavior of labor participation between 2020 and 2021. Mobility restrictions had a greater impact at the beginning of the pandemic, mainly in economies with a higher percentage of informality. At the same time, the results suggest that differences in the types and amounts of fiscal aid help to understand the disparate behavior of labor participation between economies. Countries that implemented job retention programs saw smaller declines and faster recovery in labor participation. Moreover, a negative association is observed between the size of the fiscal aid and the recovery of labor participation, especially in countries in which it was implemented via job retention programs. Finally, the estimates suggest that there was a more delayed recovery of labor participation in the countries where withdrawals of retirement funds were approved.

This paper is organized in the following way. Section 2 presents different stylized facts that emerge from comparing the behavior of labor participation across economies and review the factors that could explain the differences. Section 3 describes the econometric strategy and the variables that were included in the estimations. Section 4 presents the main results and the last section the main conclusions.

2. Stylized facts and possible explanations

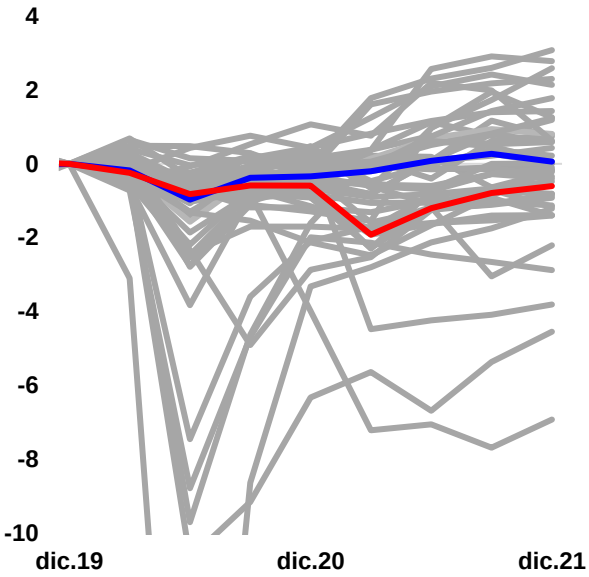
This section reviews stylized facts related to the behavior of the labor market after the pandemic that are derived from the comparison between economies. In addition, it lists the possible explanations that will be analyzed to understand the disparate behavior of labor participation between economies.

Stylized fact #1: The “great resignation” was not a global phenomenon.

The great resignation, also known as the big quit and the great reshuffle, was an economic trend in which employees voluntarily resigned from their jobs. Although some of the possible explanations was the possibility of switching to a different job, in this paper we interpret the

great resignation as the phenomenon that describes people living the labor supply. Figure 2.1 suggests that not every country saw an important decline in labor participation after the pandemic started. Moreover, some countries saw a faster and more intense recovery after the initial falls. These differences remain even when comparing within advanced or emerging economies.

Figure 2.1. Labor participation rates (LPR) between 2019.q4 and 2021.q4.

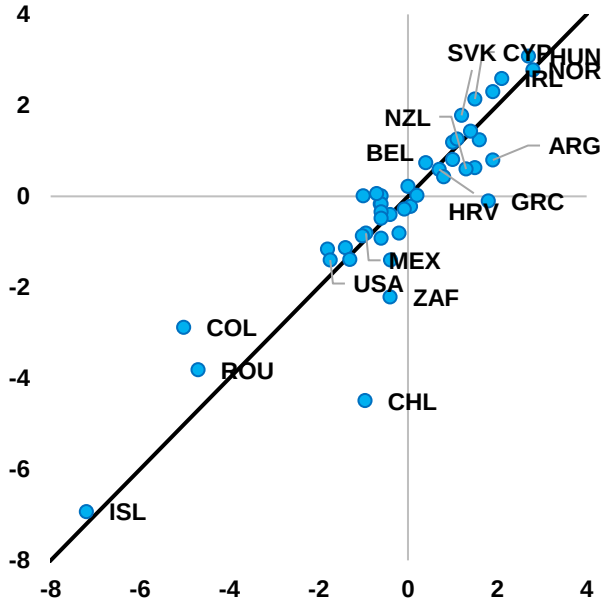


Note: 44 countries, blue lines correspond to advanced economies, red lines to emerging economies. Differences with respect to 2019.q4. Seasonal adjusted data. Source: ILO.

Stylized fact #2: There was a strong but not perfect correlation between the recovery of employment and labor force participation.

The comparison between economies suggests that countries that had a greater recovery or saw their labor participation less affected after the pandemic tended to see a greater recovery in employment. This relationship, however, is not perfect. Countries above and to the left of the 45-degree line in Figure 2.2 had a larger labor participation recovery than employment, suggesting a less tight labor market. In contrast, countries to the right and below the 45-degree line had a smaller recovery in labor participation than in employment, suggesting a tighter labor market. Understanding the behavior of the labor participation and, especially, of factors that affected the incentives to stay or return to it, could bring relevant conclusions in terms of the state of the cycle and the inflationary pressures of each economy.

Figure 2.2. Change in LPR and employment rates between 2019.q4 and 2021.q4.



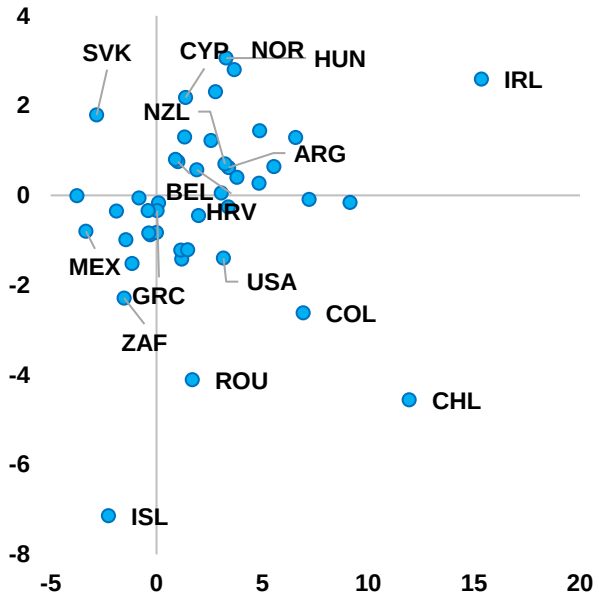
Note: 44 countries. Seasonal adjusted data. Changes in employment rates in X axis, and in LPR in Y axis. Source: ILO.

> Stylized fact #3: Some countries showed an economic recovery synchronized with the recovery of labor participation and others recovered economically but people did not return to the labor force.

The comparison between economies throws that that there is no clear link between economic recovery, measured as the recovery of GDP, and the behavior of labor participation. In fact, Figure 2.3 shows that there is a large group of countries that had a significant economic recovery but in which labor participation remains well below pre-pandemic levels. At the same time, other countries had what we call a synchronized recovery, i.e. a recovery in GDP accompanied by a better performance of labor participation.

As was mentioned before, the differences in the behavior of labor participation, employment and GDP suggest that understanding the causes behind the behavior of labor participation could be important to anticipate inflation pressures. Behind the possible causes, there are factors that directly affect the labor supply, and others that affect labor demand. Next, we detail the possible causes, the reasons why they could have affected labor participation and what other studies have found about their relevance.

Figure 2.3. Change in LPR and GDP between 2019.q4 and 2021.q4.



Note: 44 countries. Seasonal adjusted data. Changes in GDP in the axis, and in LPR in Y axis. Source: ILO and Bloomberg.

(i) Causes directly related to the pandemic

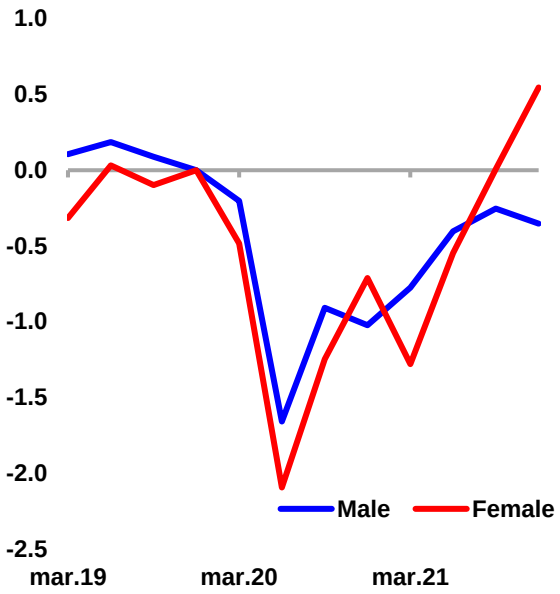
More restrictions and greater intensity of the sanitary damage generated by the Covid-19 pandemic probably affected more the labor supply due to the impossibility of working due to the restrictions itself or other home responsibilities, or because of the fear of getting infected. Mobility restrictions may have affected labor demand as well, given the inability of firms to produce. Evidence from the United States suggests that workers with access to telework were less likely to be affected by the pandemic than those that require physical interconnection [[Shibata, 2021]]. Moreover, considering the unequal impact of the pandemic between men and women, despite traditionally male tends to leave the employment more than female during economic crisis, during the pandemic it has been the opposite for the United States [[Albanesi & Kim, 2021]] specially when there were young children present [[Fabrizio et al, 2021]], [[Lofton et al, 2021]]. Figure 2.4 suggests these differences might have been more important at the beginning of the pandemic, but they started to decrease over time.

(ii) Direct fiscal transfers to households and (iii) job retention programs

Although direct fiscal transfers to households were necessary to cope with the crisis for countless families, they may have discouraged the return to work, by generating a higher reserve income for individuals. Job retention policies, which made it possible to maintain labor relations despite people were not actually working, maintained labor relationships, and prevented additional falls in labor participation. Part of this effect is mechanical to the extent

that protected employment relationships remained categorized as employment, but it could also reflect the positive effect of maintaining employment relationships and avoiding a costly search process that can disincentive many dislocated workers.

Figure 2.4. Labor male and female participation rate



Note: 45 countries. Differences with respect to 2019.q4 Seasonal adjusted data. Lines corresponds to median between countries. Source: ILO.

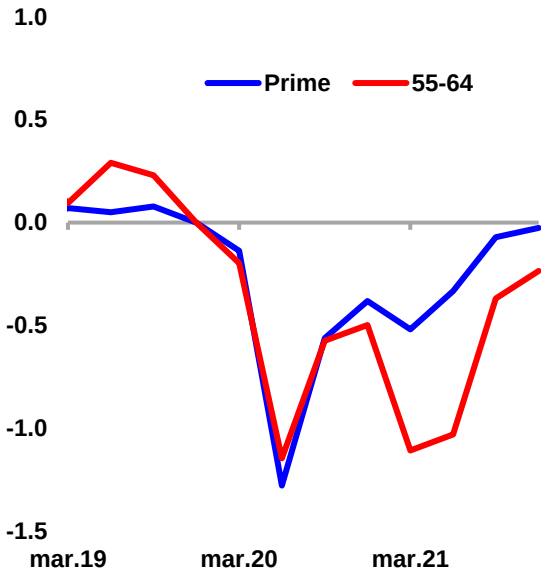
Unemployment subsidy programs in the United States ended at different points in time depending on the state, which is a good set up to evaluate and quantify the causal effect of tax relief on the labor market. [[Coombs et al, 2021]] measures the impact of the end of supplemental unemployment insurance by comparing the employment trajectories of unemployed people in states that eliminated benefits against people with the same duration of unemployment in states that maintained benefits. Using data from banking transactions, they find that ending the aid caused a 4.4 percentage point increase in the probability of finding a job. Following a similar methodology, but using survey data, [[Holzer et al, 2021]] find an increase of 13.3 pp in the transitions from unemployment to employment with the end of subsidies. [[Arbogast and Dupor, 2022]] also studies the impact of the end of the programs on employment using survey data. The results indicate that three months after the fiscal aid program ended, for every 100 fewer beneficiaries, employment in the state increased by 35 people. On the other hand, [[Michaud, 2022]] studies the expansion of unemployment benefit to groups of previously ineligible low-wage workers. She found that these workers presented a lower exit rate from unemployment than the workers typically eligible for the subsidy program. On the other side, [[Ganong et al, 2022]] finds that the increase in the unemployment subsidy, although it had a great impact on consumption decisions, had a low effect on the labor market. Using administrative data from bank accounts and identifying the causal effect with a regression discontinuity, the results indicate that the

end of the USD 600 subsidy, the exit rate from unemployment increased by only 0.8 pp in the four weeks after the end of the aid.

(iv) Early retirement

The pandemic generated strong incentives for elderly workers to retire. Elderly people were more at risk than young workers. Moreover, given the strong increase in the prices of financial assets and houses that occurred between 2020 and 2021 and the greater relative savings of older people compared to young people, the incentive to withdraw from the labor force was greater for the elderly group. There is evidence that suggests that older groups in the United States are more likely to look forward for an earlier retirement if there is an important increase in asset valuation [[Faria-E-Castro, 2021]]. This situation is shared with the United Kingdom, where earlier retirement was taken by older groups even at the presence of flexible working technology like telework [[Coombs et al, 2021]]. Although this cause is directly related to the pandemic, since it has a more permanent implication on the evolution of the labor force and productivity, we will consider it separately from cause (i).

Figure 2.5. Labor participation rate age-prime and over 55 years old



Note: 37 countries. Detrended series, differences with respect to 2019.q4 Seasonal adjusted data. Source: ILO and own calculations.

(v) The economic recovery

Countries with a greater economic recovery and, therefore, a stronger labor demand, should have encouraged a faster return of workers to the labor force. Greater increases in labor demand increase the probability of finding a job and, consequently, people's incentives to remain or enter to the labor force. However, as previously mentioned and as shown in Figure

2.3, there are economies in which GDP recovered strongly but did not have a similar recovery in the labor participation.

3. Methodology and dataset

3.1 Econometric framework

The study analyzes the process of the recovery of the labor participation rate in different countries through panel data estimations. The specification used is the following:

$$\widehat{LPF_{it}} = \beta + \delta Z_{ct} + \varphi_t + \varphi_c + \varepsilon_{ct}$$

Where $\widehat{LPF_{it}}$ represents the gap between the labor participation rate with respect to a linear trend estimated from 2014 to 2019, Z_{ct} corresponds to the explanatory variables included, φ_t is a time fixed effect and φ_c a country fixed effect. We control for country fixed effects to account for unobservable variables that are not time varying but varies between countries. We also control for time fixed effects to account for the shocks that affected all countries with the same magnitude at each period. Due to the bias that the GLS estimation presents when using short panels, an OLS estimation was chosen. The Wooldridge (2002) autocorrelation test confirmed the presence of autocorrelation in the series, so we clustered the errors at country level.

The sample period goes from 2019.4Q to 2021.4Q. It includes 38 countries selected based on the available data of the different variables and requiring that they have at least one million inhabitants. It includes Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, Czech Rep., Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Lithuania, Latvia Mexico, Holland, New Zealand, North Macedonia, Norway, Peru, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, United Kingdom and United States.

3.2 Dataset and exogeneity of the explanatory variables

This section describes the dataset and variables used for the regressions and discusses the exogeneity of each of these variables with respect to our dependent variable. The labor force participation rate gap is used as the dependent variable. While the denominator of the labor force corresponds to the number of people at a working age, the numerator corresponds to the number of people at a working age who are employed or, if not, are actively looking for and want to find a job. The data on the labor force participation rate is extracted from the International Labor Organization (ILO), is seasonally adjusted and has quarterly frequency.

(i) Causes directly related to the pandemic

The quarterly average of the stringency index (government restrictions) from Oxford University is included contemporary to the labor participation rate. In addition, the contemporary change in quarterly deaths per million inhabitants is included. The first variable aims to capture the impact of the restrictions imposed by governments, exogenous to the decision of individuals to participate in the labor force and the decision of firms to demand workers. The second variable is an instrument that pretends to measure the precautionary behavior of people because of the pandemic and the decision to enter the labor market and risk getting infected. The change in deaths and not the deaths is used to consider that people could have become accustomed to the death records over time and only an increase would cause more fear.

The interaction of the stringency index with the percentage of labor informality in 2019 is also added (losing Australia, New Zealand, Canada, Macedonia, and South Africa from the sample). This is done to capture the heterogeneous effect that the restrictions could have had on informal employment relationships in comparison to formal relationships, considering the greater presence of direct contact jobs and less possibility of teleworking in informal versus formal relationships. However, it is not ruled out that the association has the opposite sign to that suggested by this effect, considering that informal workers could be more obliged not to comply with the restrictions due to the greater difficulty of accessing to the social security system and benefits.

(ii) Job retention programs (JRP)

In the absence of a variable that allows identifying the countries that carried out job retention programs and their duration and relevance, the following variable is constructed:

- If the annual change in hours worked per worker (H) and the annual change in employment (E) were less than zero for country i in quarter t, then JRP= H/(H+E), that is, the annual change in hours worked per worker divided by the sum between the same variable and the annual change in employment. If the two variables are negative (which happens for most countries between 2020q2 and 2021q1), this ratio is between 0 and 1. The closer to 1, the more relevant the job retention program would have been because the drop was mainly absorbed by hours.

- In the corner solutions (hours fall, but employment does not, or employment falls, but hours do not) the variable takes the value of 0 or 1 depending on which of the two effects predominates (if it is hours, it is 1 because it suggests there was retention).

- In only three observations between 2020q2 and 2021q1 the two variables were positive, for which the average of the previous quarters of the variable was used.

- For the data between 2021q2 and 2021q4, as the annual variations tend to be positive in most countries due to the recovery of the labor market and the low bases of comparison, the average of the variable during the last five quarters for each country is used.

This variable is calculated from labor market variables (employment and hours). Due to the way it is constructed, it should be correlated with the relevance of job retention programs,

and it is only supposed to be related to labor participation via the impact that job retention programs had on labor participation. However, this assumption is not proven. During the period in which job retention programs were running, as was mentioned before, part of the effect is mechanical as protected employment relationships remained categorized as employment. However, the coefficient of this variable could also reflect the positive effect of maintaining employment relationships and avoiding a costly search process that can be deterrent for many displaced workers.

(iii) Direct fiscal transfers to households

The fiscal aid announced by governments after Covid-19 as a percentage of GDP is included as an explanatory variable. This variable takes the value of the fiscal packages announced by governments and collected by the IMF Policy Tracker (excluding health expenditures) from 2020q2 until the quarter in which the fiscal package was implemented. The duration of the package for each country depends on qualitative data included in the IMF Fiscal Monitor Tracker and the evolution of the structural deficit between 2019, 2020 and 2021. Although the variable is an imperfect measure of transfers to households, to the best of our knowledge there is not a detailed and global database containing the transfers to households delivered during Covid-19.

The exogeneity of this variable is not evident, considering it is possible that governments have decided to carry out larger and more extensive fiscal packages in countries where the pandemic was more severe and labor participation fell more. Considering the type of information used (data at the macro level), having a correct identification of the effect of fiscal aid on labor participation is complex. When interpreting the coefficient estimated for this variable, it will be important to interpret the results as an association and not an impact. Lastly, the interaction between JRP and fiscal aid is included. This interaction seeks to distinguish between the association that fiscal aid and labor participation had in countries that carried out employment protection programs versus countries that did not.

Finally, the amount of approved pension fund withdrawals in Peru, Canada, and Chile, as a percentage of GDP, is added as an additional variable, both in the quarter that occurred and the immediately following one. This variable should measure the effect of the immediate availability of liquidity by households. The fact that in Chile withdrawals have been practically equal to the maximum allowed and invariant to the level of income or employment status, is an argument in favor of the exogeneity of this variable with respect to the decision to work or not.

(iv) Early retirement

The gap in the real price of homes (deflated by CPI and lagged one quarter) with respect to a linear trend calculated between 2014 and 2019 is used as an instrument for the early retirement effect. It is assumed that there is a positive correlation between this variable, the wealth of the individual and the retirement decision of people close to their retirement age. It is also assumed that this variable affects labor participation only via the incentive to retire early. An interaction of this variable with the percentage of people over 55 years of age in

2019 is added to assess the possibility that this effect may have been greater in countries in which the proportion of people close to retirement was higher.

(v) The economic recovery

The GDP gap is used with respect to a linear trend calculated between 2014 and 2019, lagged one quarter to mitigate endogeneity issues with the labor participation rate.

4. Main results

This section presents and discusses the main results of our estimations. Table 1 presents simple correlations between the different variables of interest and the labor participation gap controlling for time and country fixed effect. All the coefficients have the expected sign and, as we will see in Table 2, they will be robust to the inclusion of more controls. Controlling for time and country fixed effect, labor participation was negative associated with the level of restrictions, the change in deaths, fiscal aid (coefficient not statistically significant), pension withdrawals and housing prices (coefficient not statistically significant). At the same time, the association is positive with job retention programs and the recovery of lagging activity, as expected.

Table 4.1. Simple correlations controlling for country and time fixed effect

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Stringency	**-0.0434****						
	(0.01)						
Fiscal Aid		-0.0263					
		(0.43)					
Pension fund withdrawals			**-0.597***				
			(0.052)				
Job retention programs				**0.583****			
				(0.013)			
Home prices					-0.00682		
					(0.90)		
GDP						**0.229***	
						(0.08)	
Death toll							**-0.00103****
							(0.03)
Constant	0.461	0.451	0.341	0.148	0.178	-0.207	0.167
	(0.14)	(0.31)	(0.14)	(0.55)	(0.53)	(0.36)	**(0.49)**
Country FE	Sí	Sí	Sí	Sí	Sí	Sí	Sí
Time FE	Sí	Sí	Sí	Sí	Sí	Sí	Sí
Number of observations	342	342	342	342	342	342	342
R-Sq	0.554	0.523	0.556	0.524	0.522	0.614	0.539

Note: (***) Significance at 1%, (**) Significance at 5%, (*) Significance at 10%. Standard clustered errors in parenthesis.

The coefficients estimated through the panel regressions are presented in Table 2. The panel regressions suggest that mobility restrictions and deaths had a significant impact on the

behavior of labor participation. Although the stringency index is not significant in the first specification, once we include the interaction with a dummy that takes the value 1 before 2020q4 or the interaction with the percentage of labor informality in 2019, the variable gains statistical and economic significance (as suggested by Graph 4.1). Thus, an increase in restrictions was generally accompanied by lower labor participation rates in countries with a high level of informality and/or during 2020. Regarding the fear of getting infected with Covid-19, the variable that measures the change in deaths per million of inhabitants tends to be significant and robust to the different specifications, suggesting that a more severe health impact had a negative impact on labor participation, even once we control for government restrictions.

Table 4.2. Panel estimation results

	(1)	(2)	(3)	(4)	(5)	
Stringency	-0.0198	-0.0038	0.0114	0.01256	**-0.0307****	(-)
	(0.14)	(0.78)	(0.43)	(0.46)	**(0.02)**	
Stringency x Dum. Pre-2020.q4		**-0.0351****				(-)
		(0.03)				
Stringency x Inform. (% 2019)			**-0.0013*****	**-0.0013*****		(-)
			(0.00)	**(0.00)**		
Death toll	**-0.0007***	**-0.0007****	**-0.0008***	**-0.0008***	**-0.0006***	(-)
	(0.07)	**(0.05)**	**(0.07)**	**(0.06)**	**(0.10)**	
Job retention programs	**0.6676***	**0.6332****	0.1319	0.0813	**0.6011****	(+)
	(0.08)	**(0.05)**	(0.81)	(0.87)	**(0.02)**	
Fiscal aid	-0.0211	-0.0186	**-0.0939***	**-0.0961***	-0.0222	(-)
	(0.53)	(0.58)	**(0.102)**	**(0.104)**	(0.48)	
Fisca aid x JRP			**0.1146***	**0.1166***		(+)
			(0.07)	**(0.07)**		
Pension fund withdrawals	**-0.3923***	**-0.3748***	-0.1262	-0.1355	**-0.4437***	(-)
	(0.08)	**(0.09)**	(0.45)	(0.45)	**(0.08)**	
GDP	**0.2116***	**0.2043***	**0.2335***	**0.2320***		(+)
	(0.104)	**(0.102)**	**(0.07)**	**(0.07)**		
Home prices	0.0012	-0.0003	-0.0138	0.176	0.0076	(-)
	(0.98)	(0.99)	(0.83)	(0.80)	(0.14)	
Home prices x % Pop. > 55 years				-0.0051		(-)
				(0.79)		
Country FE	Sí	Sí	Sí	Sí	Sí	
Time FE	Sí	Sí	Sí	Sí	Sí	
Number of countries	38	38	33	33	38	
R-sq	0.66	0.67	0.74	0.74	0.58	

Note: (***) Significance at 1%, (**) Significance at 5%, (*) Significance at 10%. Standard clustered errors in parenthesis.

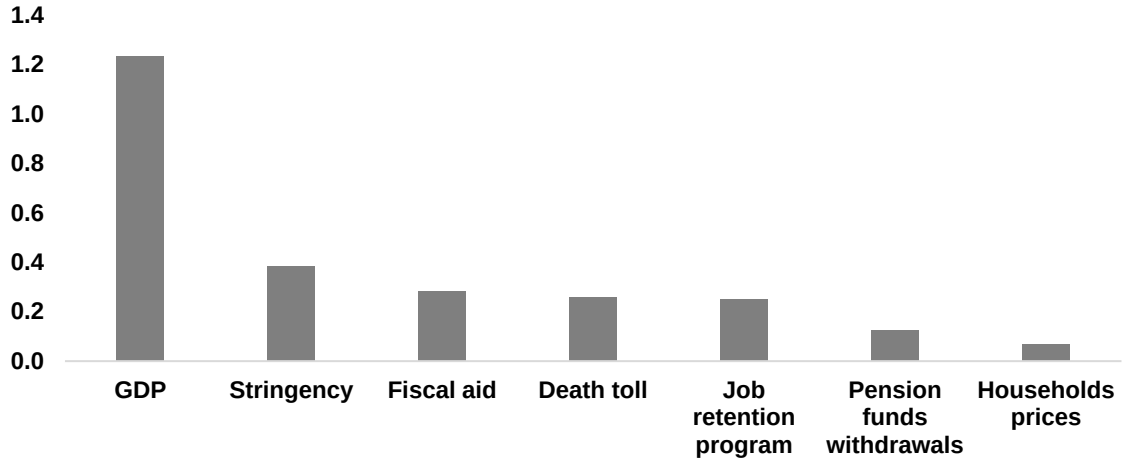
Regarding the economic recovery, captured by the GDP gap lagged one quarter, although the statistical significance is generally close to the 10% threshold, the coefficient tends to be robust to the different regressions and its economic significance is large, as Graph 4.1 suggests. Thus, a greater recovery in activity provoked a greater recovery in labor

participation on average and once we control for the rest of the variables included in the regressions.

With respect to early retirement, there seems to be no association between the increase in wealth and the behavior of labor participation. The coefficient tends to change sign depending on the specification, it is not statistically significant when including the interaction with the percentage of people over 55 years old, and its economic significance is also marginal. These results suggest the early retirement of workers was not a relevant factor to explain the disparate behavior of labor participation between countries. However, it is not possible to rule out that in some countries, such as the United States, this factor was more relevant.

The variable constructed to capture the relevance of employment protection programs generally has a positive and significant association with labor participation. Although the coefficient by itself loses significance when including the interaction with fiscal aid, the relevance of the variable must be evaluated considering the coefficient of the interaction with the fiscal aid and the fiscal packages average between countries. The results do not allow us to conclude if the retention programs were relevant only due to the mechanical effect described in the previous sections or due to the economic effect associated with the deterrence that the costly search process could generate for workers that lost their jobs.

Figure 4.1. Economic significance



Note: Economic significance calculated as the absolute value of the multiplication between the standard deviation of the variable and the estimated coefficient for each variable according to equation 3. For the interactions, the average of the variable with which it interacts is considered.

Finally, once we control for the other variables, we find a negative association between labor participation and the amount and extent of fiscal aid and pension fund withdrawals. The statistical significance of the coefficient for fiscal aid is evident only appears once we interact the variable with the job retention programs. This suggests that only in countries where retention programs were not implemented or had a low scope, the association between fiscal

aid and labor participation was negative. The coefficient that accompanies pension fund withdrawals tends to be significant and negative, except in the regression presented in column 3, possibly due to the omission of Australia from the sample. This coefficient should be interpreted with caution, considering few economies allowed for pension fund withdrawals during 2020 and 2021. The economic significance presented in Graph 4.1 suggests that the negative association between fiscal aid and the behavior of labor participation is relatively relevant in comparison to the other variables considered.

5. Conclusions

The "great resignation" was not a global phenomenon after the Covid-19 pandemic. Indeed, labor participation behaved differently between countries during 2020-2021. Understanding the behavior of the labor participation is important because of its implications for the economic cycle and long-term economic growth. While there was a strong correlation between the recovery of employment and labor force participation across the globe, the relationship is not one-to-one, and economies in which labor force participation recovered more lagged due to supply factors could suffer more persistent inflationary pressures, to the extent that these factors are maintained over time.

This paper assesses the role that different factors that affect labor supply and demand had on labor participation. Running panel regressions using quarterly data between the beginning of the pandemic and the end of 2021 for close to forty advanced and emerging economies, we analyze the relevance of the factors that could potentially explain why some economies saw smaller declines and/or a faster recovery in labor participation rates.

The results suggest that the restrictions, the fear of getting infected and the recovery of activity partially explain the differences in the behavior of labor participation between 2020 and 2021. An increase in restrictions was generally accompanied by lower labor participation rates in countries with a high level of informality and/or during 2020. Even though the economic recovery is one of the main factors, there were a lot of countries where the economic recovery was not accompanied by a similar recovery in labor participation. The results also suggest that the types and amounts of fiscal aid were also important. Countries that implemented job retention programs observed smaller declines in labor participation, although this could be a mechanical effect. Finally, the size of the fiscal aid was negatively associated with the recovery of labor participation, which it is in line with a lot of evidence found for the United States for the end of the unemployment insurance supplements.

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