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Digital labor platforms, domestic work and formalization: evidence from Argentina

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Abstract

The COVID-19 pandemic has highlighted the importance and fragility of care systems globally, resulting in multiple new challenges for women, who comprise the majority of workers in this sector. In particular, domestic work is the main source of employment for vulnerable women in Argentina, a sector globally characterized by high degrees of informality, low pay, and precarious working conditions. In this context, digital labor platforms are emerging as new contracting intermediaries, thus raising questions on their impact in terms of the generation of new labor and income opportunities for women. This article inspects the role of platforms in the definition of working conditions for domestic workers, by considering their influence in the formalization of the sector.

Empirical evidence is provided to evaluate the contribution of platforms to the establishment of formal employment contracts for domestic workers. Based on survey data from 300 women working through the sector's leading platform in the Metropolitan Area of Buenos Aires (transformed into 1048 worker-job observations), a fixed-effects model is estimated at the job level to measure the formalization effect of the platform. Results show that working through the platform almost triples the probability of landing a formal job, controlling for both observable and unobservable attributes of workers.

Keywords: paid domestic work; digital labor platforms; formalization; Argentina.

Introduction

Paid domestic work¹ is an important source of employment worldwide, especially for women, who make up the vast majority of the sector (ILO 2021b). In turn, domestic

¹ According to ILO Convention 189, domestic work is defined as “work performed in or for a household or households” and, in general terms, includes housework (mainly cooking, cleaning, shopping) and direct care tasks (caring for children, elderly and/or people with disabilities) (ECLAC-UN Women-ILO 2020; ILO 2021b).

workers account for 4.5% of global female employment, and in Latin America they represent 11.3% of female employment (ILO 2021b; ILO 2021c). Regarding their employment situation, despite the progress made in national legislation in the countries that have ratified International Labor Organization's Domestic Workers Convention 189², the informality rate remains very high (over 80% worldwide and over 70% for Latin America), which entails a high deficit in social security protection (ILO 2021b; ILO 2021c). This points to the poor working conditions faced by domestic workers—they earn lower salaries than formal employees, are less likely to work within the range of normal weekly hours, and are especially vulnerable to violence and harassment (ILO 2021b).

In this occupation labor intermediaries play an important role and their influence is central in the determination of working conditions, as they can affect positively or negatively the quality of employment relationships, and their formalization status in particular³ (Fudge and Hobden 2018). These intermediaries can be of different nature: informal networks of families and acquaintances, quasi-public or public institutions, private (either for profit or not-for-profit) employment agencies, trade unions, and digital platforms—which are playing a growing role—(Fudge and Hobden 2018). In the last decade, the latter have emerged in the domestic and care work sector as new intermediaries between households and workers. Although at the beginning their influence was mostly limited to developed countries, mainly Europe and the United States, in recent years they have expanded to developing countries (Hunt and Machingura 2016).

The emerging international literature on the platform economy in this sector has followed its deployment at a global level through case studies. These include studies on domestic work and care platforms in South Africa (Hunt and Machingura 2016; Hunt and Samman 2020; Kalla 2022), Australia (Flanagan 2019; Khan et al. 2023), the United States (Ticona and Mateescu 2018), Spain (Digital Future Society 2021; Galí Magallón 2022; Rodríguez-Modroño, Agenjo-Calderón and López-Igual 2024), Italy (Marcolin and Pais 2023), Denmark (Floros and Jorgensen 2022), India (Mewa 2020; Tandon and Rathi

² This convention aims to grant domestic workers the same rights as any other paid job.

³ Literature analyzing the most traditional type of intermediaries—agencies that recruit and allocate workers—points to a wide range of impacts. In some cases, if properly regulated, these agencies can even promote and facilitate formalization (ILO 2021b). However, at the other end of the spectrum, these agencies can also engage in unscrupulous practices that range from retaining part of workers' earnings to extreme situations that may even involve trafficking of migrant women (WIEGO 2022).

2022), the Middle East and North Africa region (Fairwork 2022), and comparative studies between New York, Berlin and Amsterdam (van Doorn 2021; 2023).

Recently, in line with the massification of communication technologies, the spread of these new intermediaries has been noted in many Latin American countries, as both the transformation of traditional employment agencies through the incorporation of digital tools and the emergence of new models of digital intervention (Blanchard 2023; Pereyra, Poblete and Tizziani 2023). In fact, literature in the region indicates that the COVID-19 pandemic has accelerated the spread of platforms in the sector (Blanchard 2023; Andrada et al. 2023). The pandemic not only promoted digitalization in the region but also modified the ways in which housework is organized, so that communication technologies replaced a large part of interpersonal exchanges for the resolution of these tasks (Poblete, Tizziani and Pereyra 2024). The significant expansion of this type of labor platforms has aroused the interest of academic literature in the region, although there are still scarce studies on the platform economy that focus on the care and domestic work sector (Blanchard 2023), and even less literature providing empirical evidence on it.

In recent years, studies in the following specific contexts were published: Argentina (Tizziani and Poblete 2022; Pereyra, Poblete and Tizziani 2023; Poblete, Tizziani and Pereyra 2024), Mexico (Cebollada Gay 2021), Brazil (Vale and Rebechi 2021; Moreno 2022; Fairwork 2023a; Cardoso and Tavares Pereira 2023; Andrada et al. 2023), Ecuador (Fairwork 2023b), and Colombia (Fairwork 2023c). These papers agree in pointing out that the platforms mainly concentrate on low workload job offers—which can be one-off or periodic—although in the aggregate domestic workers usually work long hours, by adding several jobs of a few hours each. Additionally, there are some studies that investigate the phenomenon by comparing cases in cities of different countries (Hidalgo Cordero 2022), and also at the regional level (Digital Future Society and Inter-American Development Bank 2021; Blanchard 2023; Pereyra, Poblete and Tizziani 2023; Cardoso and Tavares Pereira 2023). These analyses highlight the diversity in business models found in the region, thus generating different effects on working conditions, depending on the services provided and on the type of employment contract promoted by the platforms (as independent contractors, as household employees, or as platform employees).

Undoubtedly, the specific context in which the advancement of platforms in this sector is studied provides distinctive elements to the analyses of the phenomenon, according to the

existing regulatory framework and the socio-demographic profile of domestic workers, among other characteristics. However, it is also interesting to note that, if we consider both the international literature on the topic and the few studies available at a regional level, a question that appears repeatedly is whether this form of intermediation enables higher levels of formalization in a sector whose common characteristic worldwide is informality and precarious working conditions. The emphasis placed on this question, in turn, mirrors the discourse of many of the sector's platforms themselves, which proclaim their role in the modernization, professionalization and formalization of the sector (Digital Future Society 2021).

Indeed, the recognition of certain characteristics of the form of intermediation of digital platforms suggests a potential contribution to the accountability and formalization of paid domestic work. This could be through the institutionalization of the recruitment process, the documentation of working hours and tasks performed, digital payment interfaces and management of contractual paperwork and social security registration (Hunt and Machingura 2016; Ticona and Mateescu 2018; Pereyra et al. 2022). However, at the same time, the literature also warns that certain platform business models either do not contribute to formalization or promote work arrangements under the figure of independent contractors, undermining countries' progress in establishing regulatory frameworks centered on the figure of stable salaried employment—in line with ILO Convention 189—(Hunt and Machingura 2016; 2017; Digital Future Society 2021; Blanchard 2023; Pereyra, Poblete and Tizziani 2023).

Therefore, the study of platforms in the specific context in which they operate and the consideration of their particular features and business models becomes relevant in order to understand their role in workers' access to formalization and decent working conditions.

This study is based on the case of Zolvers, the most important platform of the sector in Argentina. The objective of the article is to describe the main characteristics of the intervention model of this platform in the country, and to evaluate its effect on the formalization of working arrangements. The concept of formal/informal employment relationship throughout the paper is based on the dominant approach in the region, which consists of workers' enrolment (or lack thereof) in the social security regime, pertaining

to their job category.⁴ In this particular sector in Argentina, as in most countries of the region, this implies the employers' registration of workers as salaried employees.

After considering the contributions of the literature on the topic, the article firstly provides a current overview of the sector, followed by a description of the platform under study, to finally evaluate its contribution to the establishment of formal employment contracts in the domestic sector. The methodological strategy is quantitative—an econometric model is estimated to measure the formalization effect of the platform considered, based on survey data collected in the Metropolitan Area of Buenos Aires in early 2020.

Background

The development of the platform economy as a tool for labor exchanges has given way to a growing literature concerned with the overall quality of jobs created. For most scholars, this new labor market has brought about a decline in the quality of employment in terms of pay and stability, contracts' transparency, wage bargaining instances and working conditions in general, including effective access to social protection (Pesole et al. 2018; Rani and Furrer 2021; ILO 2021a; De Stefano et al. 2022). According to this dominant view, the hallmark of 'gig work' is associated both to the reinforcement of pre-existing trends in terms of labor casualization (Cherry 2016; Huws, Spencer and Syrdal 2018; Liang, Aroles and Brandl 2022), as well as to new forms of precarity (Healy and Pekarek 2020). As a global trend, platform work is found to exacerbate the already vulnerable labor conditions of informal workers, and even promote the transition of formal workers into informal arrangements (Cieslik, Banya and Vira 2021; ILO 2021a; World Bank 2020). Likewise, in the context of developing countries, the dominant perspective emphasizes the precarious working conditions and uncertain working arrangements in the digital economy (Hidalgo Cordero and Salazar Daza 2020; Haidar 2020; Hunt and Machingura 2016; ILO 2021a; Madariaga et al. 2019; Centeno Maya et al. 2022; Mourelo 2020, among many others).

Given the worldwide rise of digital labor platforms in the domestic work and care sector, a field of studies on this type of intermediation has emerged. In this particular sector,

⁴ Informality has been historically regarded as a broad and complex concept for which several definitions and measurement strategies exist (see ILO 2013). For the purpose of this article, we rely on applied literature in Latin America, which shows broad consensus on the use of the lack of registration in the social security system as the main way to estimate the informally employed population (Arias et al. 2018; Maurizio and Vázquez 2019).

when it comes to analyzing the impact of platforms on working conditions, literature shows mixed results.

On the most criticized aspects, available studies highlight that several common characteristics of platforms in other sectors are also found among those that operate in this activity, such as the intense control exercised over the workforce through rating systems (Ticona and Mateescu 2018; van Doorn 2017; Fairwork 2022; Andrada et al. 2023). In addition, by stressing that domestic work presents certain distinctive features compared to other sectors within the platform economy, the literature draws attention to the characteristics of this workforce, which faces multiple forms of inequalities based on gender, race and social class belonging (Rodríguez-Modroño, Agenjo-Calderón and López-Igual 2024). These are dimensions that, as in its traditional version, continue to structure in the sphere of platforms multiple discriminations that permeate the employment relationship and access to labor rights (Hunt and Machingura 2016; van Doorn 2021; Rodríguez-Modroño, Agenjo-Calderón and López-Igual 2024). Indeed, various case studies show that it is common among platforms to use digital tools to foster trust on the part of clients, often exposing domestic workers to the aforementioned discriminations, by publishing their personal data in a standardized and comparable way, including criminal records and scores achieved in different reputation systems (Ticona and Mateescu 2018; van Doorn 2021; Cardoso and Tavares Pereira 2023).

On the other hand, given the informality and precarious working conditions that already prevail in the traditional domestic work sector, some studies state that the entry of digital platforms can contribute to improve them, in terms of formalization, financial inclusion, digital skills, connectivity and training. Firstly, by providing greater transparency, given that they operate with certain interfaces that allow workers to keep a digital record of their work, and control the hours worked and the income earned (Hunt and Machingura 2016; Mewa 2020). Secondly, it is noted that platforms can collaborate with the institutionalization of the employment relationship by paying salaries through electronic means or by promoting banking access for workers (Ticona and Mateescu 2018; Pereyra, Poblete and Tizziani 2023; Blanchard 2023). Additionally, the role of digital intermediaries in disseminating information on the applicable law and on applicable taxes is highlighted. Sometimes platforms even provide guides for employers to comply with regulations (Ticona and Mateescu 2018). In this line, there is a body of research on the subject that suggests a potential contribution of platforms to the formalization of this type

of work. Indeed, in contrast to the narrative of the “uberization” of work, domestic and care work platforms often represent themselves as agents for formalizing employment relationships (Ticona and Mateescu 2018; Digital Future Society 2021; Blanchard 2023).

In relation to this particular question, which forms the focus of analysis of this article, evidence shows that, depending on their business model, platforms can indeed contribute to formalization. However, both the international and regional literature stress that the types of intervention of domestic work and care platforms are heterogeneous, and as a consequence their role in the formalization of employment relationships is diverse.

On the one hand, the international literature notes that the business model that prevails among these new intermediaries is the “on-demand” or “uberized” model, similar to the one already operating in other sectors of the platform economy. The “on-demand” model characterizes platforms that specialize in immediate, one-off or short-term services, and in general low-hour workload, provided by an abundant workforce that is always available. It is also acknowledged that platforms operating under this modality offer workers flexibility in establishing working hours, while exhibiting extreme commodification of work through systems of control and classification of workers (Hunt and Machingura 2016; Ticona and Mateescu 2018; van Doorn 2021; Mewa 2020; Digital Future Society 2021).

Under this model, platforms generally function only as intermediaries and therefore tend not to contribute significantly to formalization, as they are limited to the matching service (Ticona and Mateescu 2018; Digital Future Society 2021). Even if there is some contribution to the transparency and visibility of the working relationship, these companies usually refer to domestic workers as independent contractors (Hunt and Machingura 2016; van Doorn 2021). In countries that have made significant advances in the regulation of the sector, such as South Africa, this means that working relationships are misclassified as self-employment when they should legally be classified as employees, and as a consequence do not guarantee the entitlements mandated within domestic worker employment regulation (Hunt and Machingura 2016; Hunt and Samman 2020). In addition, according to studies on the subject in various countries around the world, formalization as independent workers—even though this figure may be legal for the occupation in some settings—reproduces the precariousness that the sector already exhibits, since platform domestic workers continue to suffer from instability, low income

and less access to labor rights and protection (Hunt and Machingura 2016; Floros and Jorgensen 2022; Fairwork 2022).

Specifically in the Latin American region, many “uberized” business models have also been identified, acting as mere intermediaries between supply and demand, and contributing to deepening the precariousness of working conditions (Cebollada Gay 2021). The fact that they frequently offer occasional short-hours services usually goes against the chances of workers to attain stable salaried jobs. In addition, in some countries with weak regulatory frameworks for domestic work, these platforms would be contributing to increasing the most vulnerable segment of the occupation. For example, in Brazil, the Donamaid platform promotes the figure of domestic workers as “self-employed cleaning professionals” by relying on the legal definition of independent domestic workers in this country—this is, those workers who work less than two days a week for the same employer, known as “diaristas”—(Vale and Rebechi 2021; Pereyra, Poblete and Tizziani 2023).

On the other hand, the international literature also indicates that other types of business models can be found among the domestic work and care platforms, closer to that of the traditional employment agencies that have been operating in the sector for a long time. This other set of business models differ from the “on demand” model because they are exclusively dedicated to the matching service, with lower control and monitoring by the platform, and specialize in stable medium and long-term contracts among workers and households⁵ (Rodríguez-Modroño, Agenjo-Calderón and López-Igual 2024). Within this category there is a large group of platforms that, in addition to recruiting workers and connecting them with clients, provide services for the administration and monitoring of the employment relationship, and thus can contribute to domestic workers’ access to social protection (Digital Future Society 2021).

This last group is recognized to have a greater formalization potential, through these personnel management services that are optional on some platforms and mandatory on others. For example, in Spain several platforms provide the service of handling the legal and administrative work on behalf of the household, including the signing of the contract and the registration of the domestic worker in the social security system (Digital Future Society 2021; Rodríguez-Modroño, Agenjo-Calderón and López-Igual 2024). Similarly,

⁵ Although these stable contracts may occasionally coexist with offers of one-time gigs.

the analysis of care platforms in the United States carried out by Ticona and Mateescu (2018) shows that some platforms (although they adopt certain characteristics of the “uberized model”)⁶, provide digital payment interfaces that also include the completion of tax registration and the preparation of salary receipts, promoting the hiring of the domestic worker as a household employee. However, these studies also warn that if these services are optional for households then their contribution to formalization weakens, because they have greater reach when they are offered in conjunction with the matching service, in such a way that it is not possible to use one service without also contracting the other (Ticona and Mateescu 2018; Digital Future Society 2021).

Latin American context also features platforms that, in addition to the matching service, offer worker management services. These are considered to contribute to a greater extent to the formalization of the employment relationship between the worker and the household-employer (Blanchard 2023). In Argentina, Pereyra, Poblete and Tizziani (2023) carried out qualitative research on the Zolvers platform, the one analyzed in this article, and highlighted its contribution to formalization. This is achieved by providing services that simplify compliance with legal obligations on the part of households, which often face various difficulties in going through bureaucratic systems and norms that determine their duties as employers (Pereyra, Poblete and Tizziani 2023). At the same time, the authors warn that although it is a model that seems to promote formalization, it also has certain characteristics that imply the perpetuation of precarious working conditions in the sector. For example, the prevalence of short-hours contracts means that domestic workers have to negotiate working conditions with multiple employers, in a context of highly asymmetrical bargaining power. Additionally, the rating system is unidirectional (only employers can rate employees) and its consequences remain opaque for most workers (Tizziani and Poblete 2022; Pereyra, Poblete and Tizziani 2023).

Finally, the international literature on the subject has recently identified a third group of platforms operating under a different business model, although at the moment its presence is clearly minority. For Italy, Marcolin and Pais (2023) provide evidence of a platform that directly hires domestic workers formally, the only case in the country. The authors underline that the services offered through the platform still tend to be of low workload and that it maintains the possibility for the worker to establish their preferred schedules

⁶ Such as rating systems and the possibility of immediate hiring by offering abundant available workforce (Ticona and Mateescu 2018).

(as in the “on-demand” model). At the same time, the study warns about certain problems that arise from this direct hiring model in the Italian context, because given that the employer is the platform and not the household, the formalization of the relationship cannot be achieved through the National Collective Labor Agreement for domestic work, but through the collective agreement for companies that operate in the service sector, which is designed for industrial cleaning and establishes a minimum weekly workload; so it is difficult to comply with the prevalence of short-hours jobs in domestic cleaning (Marcolin and Pais 2023).

The studies available in the region also identify some platforms that directly hire workers, in order to ensure the formalization of employment relationships. The study located in Mexico by Cebollada Gay (2021) explains that the Homely platform adopts this model, although partially, as it hires only 15% of workers, those who work full-time through the platform. Colombia also features platforms that follow this model. As detailed in the Fairwork report (2023c), the platforms Hogarú and AseoYa directly hire all domestic workers, thus providing access to social security, sick leave and maternity leave, in accordance with Colombian regulations.

In sum, the contributions of the literature on the topic—both international and regional—reveal that the types of intervention of domestic work and care platforms are heterogeneous, and that as a consequence their role in the formalization of employment relationships is diverse. Therefore, the study of platforms in the specific context in which they operate and the consideration of their particular features becomes relevant in order to evaluate to what extent they can contribute to the formalization of working arrangements.

The current state of the domestic work sector in Argentina

In Argentina, as in the rest of the region, domestic work represents the main source of female employment: in 2023 15.5% of employed women work in this activity (Pereyra and Poblete in press). This is the sector with the greatest informality and precariousness in the country’s entire labor market. A situation that persists despite the progress made after the ratification of the ILO Convention 189 and the subsequent adaptation of national legislation. In fact, of the 36 countries that ratified this agreement, 14 belong to the Latin American region, and 11 of them have modified their legislation granting domestic workers the same (or nearly the same) rights as those that salaried employees have (ILO 2021c). Argentina is a case in point—in 2013 a law was passed carrying substantial

improvements for these workers. From that point onwards, all domestic workers were to be considered as salaried employees regardless of their monthly workload, and they were also entitled the same rights as the rest of private salaried workers (Pereyra and Poblete 2015).

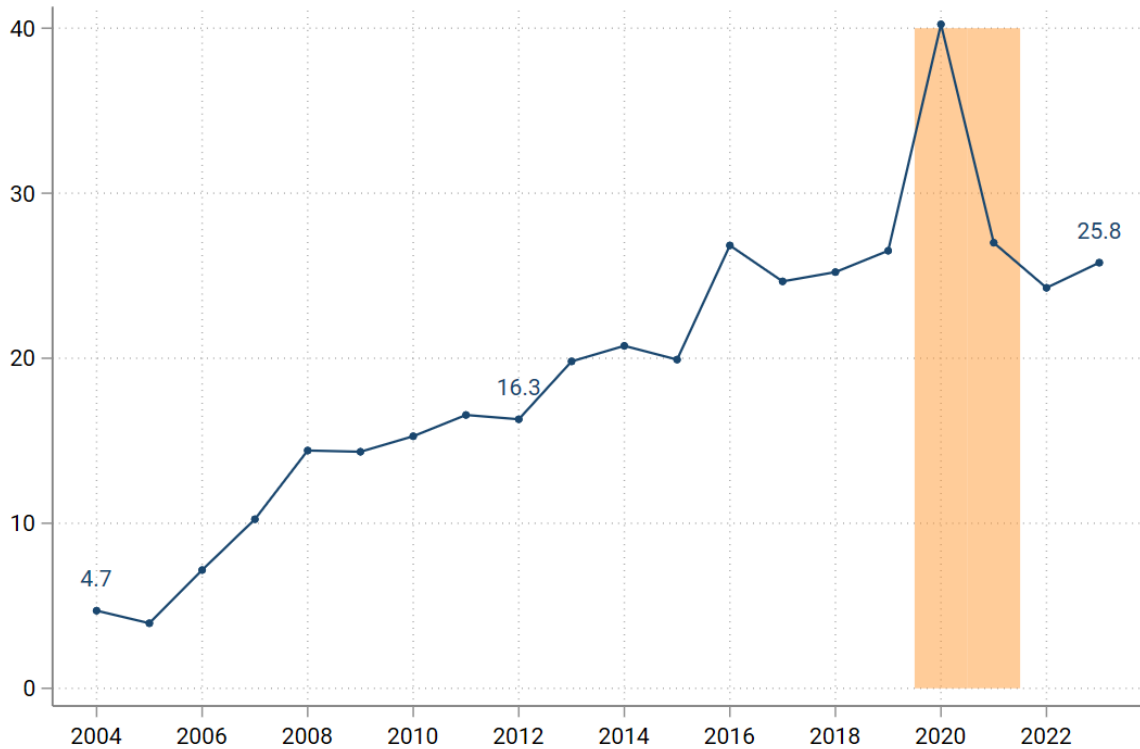
In addition, during the ten years that followed the adoption of this new legislation, the State developed different strategies to promote formalization as a first and necessary step to achieve effective recognition of rights (Pereyra and Poblete in press). As mentioned earlier, in Argentina formalization of salaried working relationships implies employers' registration of workers in the social security system and the payment of the corresponding monthly contributions⁷. On the one hand, one of the main and most effective strategies to foster formalization consisted of granting tax advantages to complying employers. On the other hand, the bureaucratic procedures involved were simplified. Additionally, awareness campaigns were carried out frequently.

As a result, in the period between 2004 and 2023 the sector's formality rate experienced a significant increase (Figure 1): the percentage of domestic workers whose main job was formal grew from around 5% to more than 25%.⁸ It is important to note that the pandemic period constitutes an exception for the purposes of the analysis since, as occurred in other occupational sectors, the destruction of jobs was mainly concentrated in informal ones. This generated a temporary increase in the sector's formality rate, due to the higher survival rate of formal positions, but which reverted with the reopening of the economy in 2021.

Figure 1. Evolution of the formality rate in the domestic service sector, 2004-2023

⁷ Employers' contributions in this sector have traditionally been much lower than those of the general system.

⁸ This calculation is made considering each domestic worker's main job (the one where she works the most hours a week).

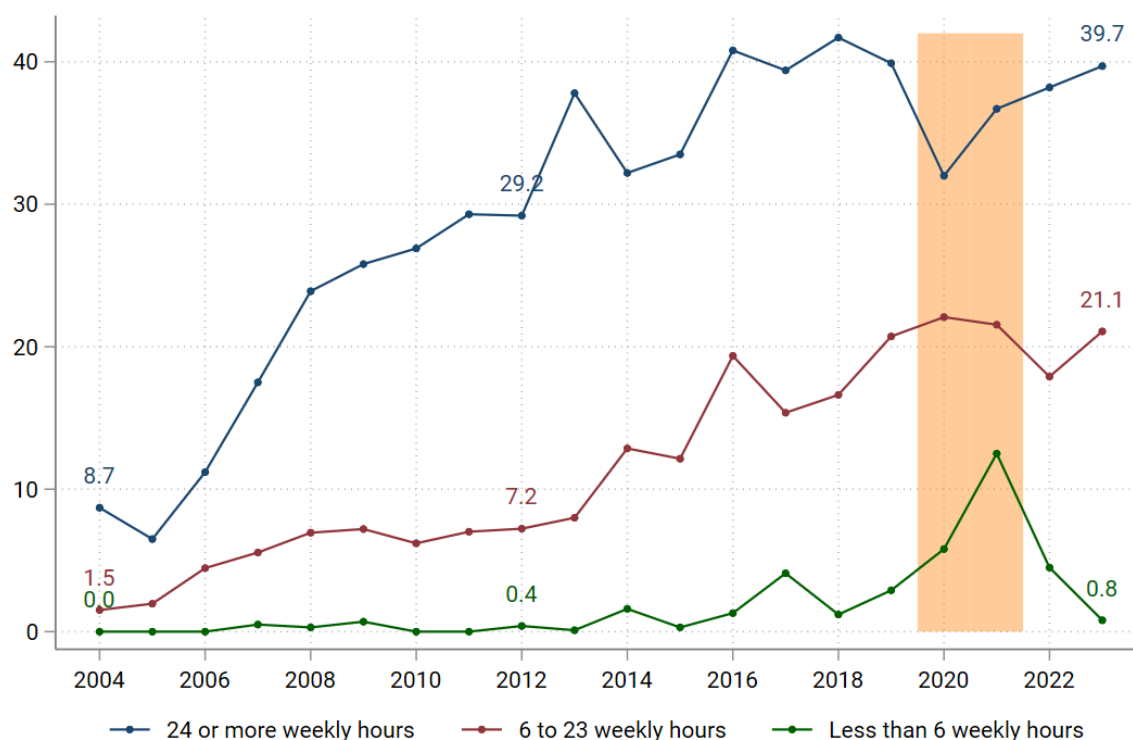


Source: Own elaboration based on Household Permanent Survey, second quarter. Shaded area indicates COVID-19 pandemic.

Even though the formality rate shows a general increase over the last 20 years, nearly 75% of domestic workers still continue to work in informal positions. Moreover, the lower propensity to formalize the employment relationship in short-hours positions remains a constant along the period (Figure 2).

In accordance with sector regulations in the country, we have divided jobs in three working hours brackets, indicating typical forms of hiring in domestic service: partial job positions—generally paid by the hour—, including very short-hours positions (less than 6 weekly hours) and part-time jobs (6 to 23 weekly hours), and full-time jobs—paid monthly—(24 or more weekly hours).

Figure 2. Evolution of the formality rate by working hours brackets, 2004-2023



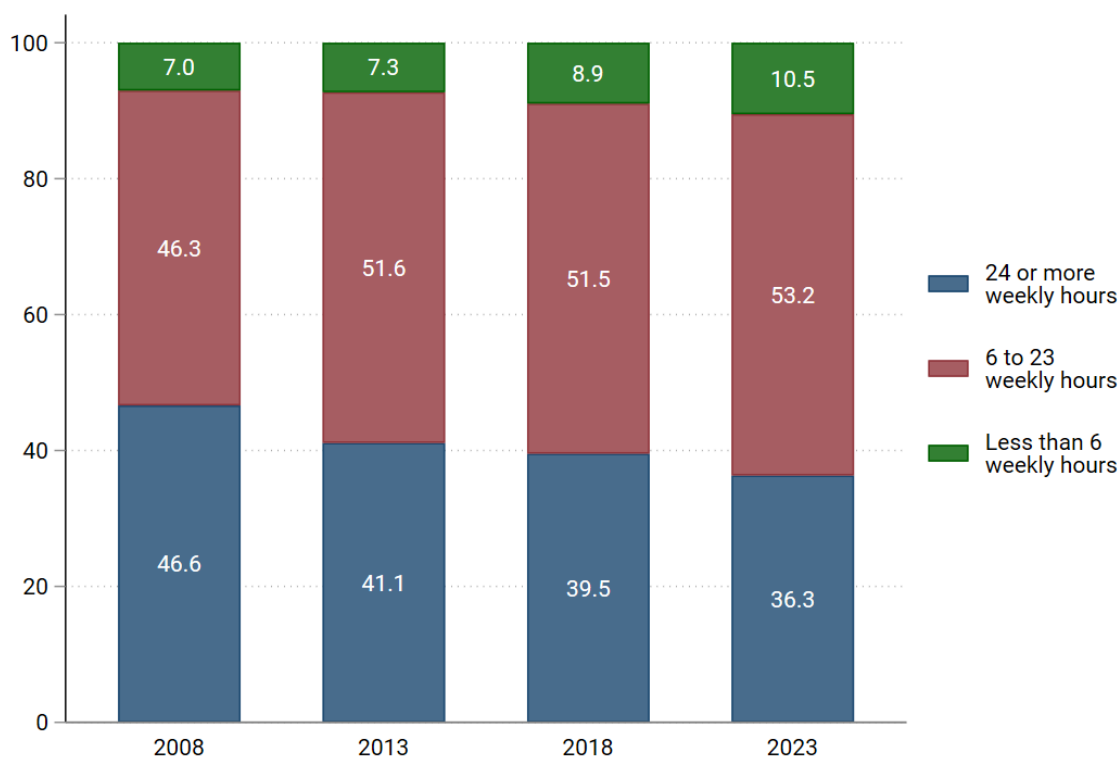
Source: Own elaboration based on Household Permanent Survey, second quarter. Shaded area indicates COVID-19 pandemic.

As shown in Figure 2, in line with accumulated evidence regarding the reluctance of short-hours positions to formalization policies and access to labor rights in general (Pereyra and Tizziani 2014; Pereyra and Poblete in press), we can see how the gap in the formality rate between full and partial positions remains large over time. This situation is considered to be related to the propensity of employers to conceive short-hours positions as occasional “help” instead of “real work” (Pereyra 2017; Pereyra and Poblete in press). In 2012, prior to the implementation of the new law for domestic work, the level of formalization of positions of more than 24 hours a week more than tripled the level of formalization of positions of 23 hours a week or less. From 2013 onwards, the boost to formalization caused by the new labor regime led to an increase in the formality rate across all working hours brackets, but the gap remained. In fact, in 2019, before the pandemic, the formality rate of full-time positions was twice that of part-time positions and four times that of very short-hours jobs. Again, the figures corresponding to the pandemic period call for a different analysis, and then the sector returned to previous levels.

The tendency shown above is relevant due to the prevalence of partial job positions in the domestic work sector. Currently, more than 60% of the jobs correspond to positions of

less than 24 hours a week (Figure 3). If we consider its evolution over time, the subgroup of full-time jobs has experienced a contraction of more than 10 percentage points (pp) in favor of the two other subgroups of short-hours positions.

Figure 3. Evolution of the composition by working hours brackets, selected years



Source: Own elaboration based on Household Permanent Survey, second quarter.

To sum up, it is notable that the segment of short-hours jobs makes up a relevant subgroup of domestic work in Argentina, because of its high weight in the sector (which has been increasing in recent years) and furthermore because these types of jobs appear to be the most difficult to formalize.

Description of the platform under study

Zolvers started working in Argentina in 2014 and it is the most important platform focused on providing domestic work for households in the country, mostly cleaning services. It has so far expanded to Mexico, Colombia and Chile.⁹ The platform presents itself as an “online community of domestic workers” and it mainly provides a matching service, with the cost of the intermediation entirely paid by employers.

⁹ In these countries the business model is somewhat different from the Argentine case analyzed in this article (see Teixeira 2024).

As reported by the company in the framework of this study, in 2019 this digital platform had 20,000 active domestic workers in the Metropolitan Area of Buenos Aires, all of them women. Zolvers facilitates the job search for domestic workers in positions close to their homes, predominantly for cleaning tasks (although occasionally they may also include care services). The time committed to these positions can be arranged on a weekly or monthly basis, but they can also include one-time gigs.

The platform offers and promotes these services at an hourly rate that varies according to the weekly workload (the hourly price decreases as the weekly workload increases). In any case, these prices are always in line or slightly above the legal minimum wages established for the sector. However, the impact of the platform in setting the price of work is restricted to the initial period of the employment relationship—the evolution of wages from that point onwards is subject to negotiation between domestic workers and employers.

Like most digital platforms, the company applies one-way rating systems where workers are evaluated, but clients are not (Sedacca 2022; Flanagan 2019; Van Doorn 2017). In the case of Zolvers, these qualifications depend exclusively on the employers' assessments and often lead to temporary deactivations. Although the deactivation of the workers' account suspends reception of new job offers, it does not affect the continuity of salaried contracts previously agreed with other employers through the platform.

The platform seeks to make its use attractive to employers by offering “trustworthy” employees. In line with what is observed in the literature on platforms in the sector (Sibiya and Du Toit 2022; Ticona and Mateescu 2018; Shoenbaum 2016), Zolvers promotes contact with “verified” workers—the ones that have positive references from previous employers, and have passed psychological evaluations and criminal background checks. Also, in order to reinforce the trust that employers place in the service, the company offers a “satisfaction guarantee”. At the time the field work was carried out, this guarantee implied the possibility of “changing” workers up to four times within the first 30 days of work if the employer was not satisfied.¹⁰ Another service free of charge for employers is the so-called “calculator”, a digital device that allows tracking the hours worked by the employee.

¹⁰ At the time this article was written, the deadline had been extended to 60 days.

Probably one of the services that stands out the most in the context of an occupation marked by informality, is the service offered by the platform to carry out the formalization of the working relationship on behalf of the household-employer, which is free of charge and optional for clients.¹¹ This entails the first step in any formal working relationship in Argentina, which is the registration of the worker in the social security system.

Additionally, the platform offers a service called *Zolvers Pagos*, which is a more comprehensive device as it includes the completion of the other steps required in a formal employment relationship. It is also optional but available to all potential employers, even when the company has not intervened in the search and hiring of the domestic worker. In exchange for a monthly fee paid by employers, *Zolvers Pagos* constitutes a financial and labor intermediation device that allows households to “free themselves” from the bureaucratic procedures related to both the payment of salaries and the contributions to social security. Indeed salaries are automatically deducted from employers’ bank accounts and transferred to the workers (the corresponding receipts are generated for both parties). This procedure also implies that the platform opens a bank account for domestic workers who do not have one (something which in turn provides access to other financial products such as debit and credit cards).¹² Furthermore, if the employer so wishes, the company handles the monthly contributions to the social security of workers on behalf of employers (with the same methodology as in the case of salary payment).

As a consequence, the company frequently promotes itself as an aid to the “labor and financial inclusion of workers in the sector”.¹³ Aside from the services described, this image is reinforced through the platform’s communication channels, which constantly circulate information on labor rights in the sector. In fact, the company maintains an updated “blog” with reports about the regulation of the sector, salary updates and the latest news related to the occupation. It also sends e-mails to employers and workers with the most salient aspects of this information.

It is important to highlight that *Zolvers* has been successful among the segment of short-hours jobs: 93% of surveyed women declared that their main job¹⁴ did not surpass 23

¹¹ For this and for all the procedures on behalf of the employers described here, the company requires “sensitive” information which clients need to trust it. This is mainly the case with employers’ username and password to operate in the Inland Revenue webpage.

¹² At the time the information was collected, these accounts were opened in banks with which the platform had commercial arrangements, which allowed workers to access credit cards for free.

¹³ *La Nación* 11/01/2017; *Clarín* 11/02/2017; *La Nación* 01/10/2018.

¹⁴ Defined as the one that involves the most weekly hours.

hours a week. And 35% of them indicated that their main job was of less than 6 weekly hours. In any case, moonlighting is the norm inside the platform: the average number of jobs/employers held by workers is 3.3. Additionally, it is noteworthy that these workers often combine different types of arrangements: stable short-hours jobs found through the platform, stable short-hours jobs found outside the platform, and one-time gigs which are mostly facilitated by the platform.¹⁵

Data collection and methods

Characterization of the sample

The article uses primary data collected between December 2020 and March 2021, by means of a quantitative survey on workers who perform paid domestic work through Zolvers in the Buenos Aires Metropolitan Area (from now on, UNGS-AFD survey).¹⁶ 300 female workers were interviewed and data on the characteristics of simultaneous job positions held by each participant was collected, thus generating information on 1,048 job positions, all of them corresponding to jobs that began prior to the COVID pandemic.¹⁷ An important clarification is that the survey did not collect data on one-time gigs¹⁸. The sample selection¹⁸ was carried out randomly based on a list of workers provided by the company itself. In order to minimize rejection, a financial incentive was offered. The questionnaires were then administered using the CATI (Computer Assisted Telephone Interviewing) system. Additionally, in order to perform comparisons to the sector workforce as a whole, data from Argentina's Permanent Household Survey (Encuesta Permanente de Hogares, EPH) was used.

¹⁵ All surveyed domestic workers had at least one stable position through Zolvers. Of these, 36% had at least one job paid through Zolvers Pagos. Likewise, 33% of all those surveyed had at least one job as a domestic worker outside the platform. And 62% of the sample declared to take one-time gigs through Zolvers at least once a month.

¹⁶ The survey was developed within the framework of a research project entitled "Platform economy and personal services in the Buenos Aires Metropolitan Area. Implications on working conditions and gender inequalities", based at the National University of General Sarmiento (UNGS) and financed by the Agence Française de Développement (AFD).

¹⁷ The UNGS-AFD survey inquired about the characteristics of jobs before and after March 2020 (when mandatory isolation was enforced in Argentina due to the COVID-19 pandemic). The use of information corresponding to positions prior to the pandemic allows us to provide an overview of the sector in times of "normality".

¹⁸ Since one-time gigs completely lack labor rights and social protection (as stated previously, all jobs in the sector should be salaried by law), collecting information on these jobs did not contribute to the primary aim of the survey which was to enquire on the labor conditions of Zolvers jobs.

Table 1. Workers' attributes, UNGS/AFD survey vs Permanent Household Survey

	EPH	EPH (jobs under 24 weekly hours)	UNGS/AFD main jobs
Formality rate	0.2526	0.1649	0.4904
Weekly hours: less than 6	0.1498	0.2663	0.2197
Weekly hours: 6 to 23	0.4127	0.7334	0.6752
Weekly hours: 24 or more	0.4375		0.1051
Age	43.63	42.9	38.4
Foreigner	0.2153	0.1751	0.3599
Education: primary	0.6318	0.6011	0.1529
Education: secondary	0.3272	0.3554	0.586
Education: tertiary	0.041	0.0435	0.2611
Children	0.5389	0.6	0.6369

Source: authors' calculations based on UNGS/AFD survey 2020-2021 and Permanent Household Survey, fourth quarter 2019. In 2020, the COVID-19 pandemic imposed heavy limitations on the Permanent Household Survey.

Our sample differs from EPH in essentially four ways. Firstly, jobs in the UNGS/AFD sample are mostly concentrated in the 6 to 23 weekly hours bracket, which contains 67.5% of cases, while this proportion is only 41.3% in the EPH. In the EPH data, 43.8% of jobs involve more than 24 weekly hours, while only 10.5% of jobs belong to the hours bracket in our sample. This feature is in line with short-hours jobs that prevail within digital labor platforms (many times referred to as the “gig economy”). Secondly, the workers we have surveyed are somewhat younger, with a mean of 38.4 years, compared to a mean of 43.6 in EPH (42.9 in the subsample of jobs under 24 weekly hours). Thirdly, our sample features a higher educational level than official data—26.1% of Zolvers workers have completed tertiary education, while this is only the case for about 4% of workers surveyed in EPH. Finally, we have found a proportion of foreigners of 36%, which almost doubles that of EPH (21.5%, or 17.5% in the subsample of jobs under 24 weekly hours).

Indeed, these attributes described for Zolvers workers are consistent with previous evidence on the platform economy as a whole. Younger workers are more likely to master

digital skills required to enter the platform economy (Madariaga et al. 2019). In this same line, ILO (2021c) shows that high educational attainment is also a feature that allows workers to perform better in these digital environments. When it comes to the country of origin, literature also shows that migrants are overrepresented in platform labor, as a consequence of the lack of social networks to enter the labor market of the destination country (Swyzen and Piasna 2024; Van Doorn et al. 2022; ILO 2021b).

Probably as a consequence of these differences, our sample shows a very large formality rate compared to EPH—49% versus 25% (or 16.5%, considering only the jobs with shorter working weeks). In other words, the workers we analyze in this paper are intrinsically more prone to formal jobs, probably due to the fact that they are different from the rest of the domestic service labor market in observable attributes—they are younger, more educated and include more foreigners, on average.

Now we move on to a more detailed characterization of our estimation sample. Table 2 shows some relevant descriptive statistics. We have divided jobs in three working hours brackets, according to typical forms of hiring in domestic service.

Table 2. Descriptive statistics for the full sample of jobs

Weekly hours	Non-Zolvers		Zolvers, non-Zolvers Pagos		Zolvers Pagos	
	Proportion	Formality rate	Proportion	Formality rate	Proportion	Formality rate
Less than 6	58.2	10.7%	53.2	21.5%	52.2	54.3%
6 to 23	34.4	15.9%	42.6	38.1%	42.5	76.3%
24 or more	7.4	36.8%	4.2	50.0%	5.2	85.7%
All		14.5%		29.8%		65.3%

Source: authors' calculations based on UNGS-AFD survey 2020-2021.

Considering all surveyed jobs held by interviewees, more than half feature only a small amount of hours a week (less than 6), while full-time jobs are quite scarce—in the aggregate, more than 90% of the jobs are of less than 24 weekly hours. This finding seems independent of whether the job is found through the platform or not (we will come back to this later on). The formality rate, nevertheless, shows positive association both to the

use of Zolvers and also to the length of the working week. Moreover, while almost 30% of jobs are formal when the employer and employee are matched through Zolvers (without the use of Zolvers Pagos), this proportion rises to more than 65% if the wage is in fact paid through Zolvers Pagos, while it is below 15% for the rest of the market.

Table 3. Descriptive statistics for main jobs

Weekly hours	Non-Zolvers		Zolvers, non-Zolvers Pagos		Zolvers Pagos	
	Proportion	Formality rate	Proportion	Formality rate	Proportion	Formality rate
Less than 6	20.3	16.7%	20.1	35.1%	28.7	51.6%
6 to 23	64.4	18.4%	69.6	41.4%	61.1	74.2%
24 or more	15.3	33.3%	10.3	52.6%	10.2	81.8%
All		20.3%		41.3%		68.5%

Source: authors' calculations based on UNGS/AFD survey 2020-2021.

In table 3 we display the same results but only for each worker's main job (the one where she works the most hours a week). This definition naturally implies larger average hours for each job, however, full-time jobs remain a very small proportion of the sample (15% or fewer cases). The formality rate is also higher overall and its correlation to the use of Zolvers (and Zolvers Pagos in particular) is again noticeable.

In comparison to the composition of the sector as a whole in terms of working hours segments (Table 1), this table also shows a greater concentration of the platform in positions of less than 24 hours a week. As noted before, moonlighting is the norm inside the platform, so the majority of the domestic workers combine several jobs of low workload each, either found through the platform and outside the platform.

Empirical strategy

We estimate a linear regression model at the job level with worker fixed effects:

$$formal_{i,j(i)} = \alpha_i + \beta zolvers_{i,j(i)} + x_i\gamma + u_{i,j(i)} \quad (1)$$

Where $formal_{i,j(i)}$ is a dummy that indicates whether job j of worker i is formal and $zolvers_{i,j(i)}$ is a dummy that indicates whether that job was found through Zolvers. x_i is

a vector of control variables that includes age (linear and quadratic), a foreigner dummy, educational attainment dummies and a dummy that indicates whether the worker is responsible for taking care of any children in the household. α_i is a worker fixed effect that captures all unobserved heterogeneity between workers, including any variability in attributes such as productivity and preferences. Finally, $u_{i,j(i)}$ is an error term.

The parameter of interest is β , which is interpreted as the effect of Zolvers on the probability of finding a formal job, *ceteris paribus* worker's characteristics, both observable and unobservable. Since α_i is probably correlated to $zolvers_{i,j(i)}$ (even after controlling for x_i), a traditional estimation of (1) through Ordinary Least Squares (OLS) will yield a biased, inconsistent estimate of β . Therefore, we implement the within estimator, which uses worker-demeaned variables to remove the effect of α_i on the outcome variable (a procedure that is equivalent to adding worker dummies to the estimated equation).

We will also consider two alternative specifications of (1). The first replaces the regressor of interest with $zolverspagos_{i,j(i)}$, which only captures the use of Zolvers Pagos, thus comparing workers that found their job through Zolvers and are paid through Zolvers Pagos to those who fail to fulfill either one condition or the other. The second alternative specification uses $justzolvers_{i,j(i)}$, a dummy that equals one if the job was found through Zolvers but the worker is not paid through Zolvers Pagos, thus measuring the effect of only using Zolvers (and not that of Zolvers Pagos).

As for the variance structure of $u_{i,j(i)}$, we consider the possibility of heteroskedasticity and therefore compare traditional estimation under homoskedasticity to heteroskedasticity-robust standard errors and individual-clustered standard errors. As we will show, this correction has a negligible effect on the results despite moderate sample size, which indicates this is not a major concern. Last but not least, the composition of x_i was chosen drawing on previous literature but also after thorough exploration of the dataset.

One threat to identification of β is the possibility that $u_{i,j(i)}$ includes a job fixed effect that is correlated to the regressor of interest. Although we cannot rule out this possibility (as there is no way to control for job effects in our setting), we will show this is very likely not the case, as several metrics of job quality show no statistically significant difference between Zolvers and non-Zolvers jobs. Another source of concern is the potential

restrictiveness of the linearity assumption, so we will show results obtained from a Logit version of (1) as well.

Results

Table 4 shows estimation results for different estimations of the first model. The use of Zolvers raises the probability of obtaining a formal job by 27 pp in traditional OLS estimations, and by 30 pp in the preferred specifications that control for worker unobserved heterogeneity. The use of a Logit specification instead of the traditional linear model exerts a negligible effect on this result and all estimations are statistically significant at the 99% level, irrespective of whether corrections for heteroskedasticity are implemented or not.

Table 4. Estimation results for Zolvers dummy

	(1)	(2)	(3)	(4)	(5)	(6)
Zolvers	0.2708***	0.2708***	0.2708***	0.3048***	0.3048***	0.2698***
Age	0.0055	0.0055	0.0055			0.0005
Age square	-0.0001	-0.0001	-0.0001			
Foreigner	0.1065***	0.1065**	0.1065***			0.1056***
Primary education	-0.0373	-0.0373	-0.0373			-0.0380
Tertiary education	-0.1021**	-0.1021*	-0.1021**			-0.0987**
Children	-0.0015	-0.0015	-0.0015			-0.0030
Observations	906	906	906	906	906	906
R-squared	0.0616	0.0616	0.0616	0.0678	0.0678	
Model	Linear	Linear	Linear	Linear	Linear	Logit
SE	Classic	Clustered	Robust	Classic	Clustered	Classic
Fixed Effects	No	No	No	Yes	Yes	No
Number of workers	282	282	282	282	282	282

Source: authors' calculations based on UNGS-AFD survey 2020-2021. Column (6) shows marginal effects obtained from Logit estimation.

These estimated effects are quite large. As shown before, only 14.5% of domestic service jobs found outside Zolvers in our sample are formal (Table 2), which means the platform essentially triples this probability. Age effects are small and statistically not different from zero in all specifications. The same is true for the childcare dummy. Foreigner workers show a larger probability of having a formal job than natives, while the opposite is true for workers with tertiary education.

Table 5. Estimation results for Zolvers Pagos dummy

	(1)	(2)	(3)	(4)	(5)	(6)
Zolvers	0.3894***	0.3894***	0.3894***	0.4231***	0.4231***	0.3891***
Age	0.0106	0.0106	0.0106			0.0005
Age square	-0.0001	-0.0001	-0.0001			
Foreigner	0.0778**	0.0778*	0.0778**			0.0786**
Primary education	-0.0280	-0.0280	-0.0280			-0.0283
Tertiary education	-0.0787*	-0.0787	-0.0787*			-0.0783*
Children	-0.0049	-0.0049	-0.0049			-0.0045
Observations	906	906	906	906	906	906
R-squared	0.1357	0.1357	0.1357	0.1471	0.1471	
Model	Linear	Linear	Linear	Linear	Linear	Logit
SE	Classic	Clustered	Robust	Classic	Clustered	Classic
Fixed Effects	No	No	No	Yes	Yes	No
Number of workers	282	282	282	282	282	282

Source: authors' calculations based on UNGS-AFD survey 2020-2021. Column (6) shows marginal effects obtained from Logit estimation.

Table 5 shows results for the exercises that use Zolvers Pagos as the variable of interest. Here, the estimated effects are even larger—39 pp when data is not worker-demeaned and 42 pp when it is. In other words, the use of both Zolvers and Zolvers Pagos causes an even larger increase in the probability of the job being formal.

Table 6. Estimation results for just Zolvers dummy

	(1)	(2)	(3)	(4)	(5)	(6)
Zolvers	0.1527***	0.1527***	0.1527***	0.1545***	0.1545***	0.1510***
Age	0.0106	0.0106	0.0106			0.0009
Age square	-0.0001	-0.0001	-0.0001			
Foreigner	0.1001**	0.1001*	0.1001**			0.0985**
Primary education	-0.0221	-0.0221	-0.0221			-0.0229
Tertiary education	-0.1048**	-0.1048*	-0.1048**			-0.0984**
Children	-0.0031	-0.0031	-0.0031			-0.0047
Observations	660	660	660	660	660	660
R-squared	0.0355	0.0355	0.0355	0.0229	0.0229	
Model	Linear	Linear	Linear	Linear	Linear	Logit
SE	Classic	Clustered	Robust	Classic	Clustered	Classic
Fixed Effects	No	No	No	Yes	Yes	No
Number of workers	240	240	240	240	240	240

Source: authors' calculations based on UNGS-AFD survey 2020-2021. Column (6) shows marginal effects obtained from Logit estimation.

Finally, in table 6 we find the estimated effects for the “just Zolvers” variable, as defined in the methodology section. The estimates are close to 15 pp in all estimations, so that the control for unobserved worker effects plays a negligible role in this particular specification. These effects are smaller than the ones obtained for the Zolvers dummy, implying that getting a job through Zolvers but not being paid through Zolvers Pagos reduces the formalization effect vis-à-vis the use of both the platform and the Zolvers Pagos feature.

As stated previously, potential job heterogeneity constitutes a threat to identification as such differences might be correlated to the use of Zolvers. Table 7 shows evidence that establishes this is unlikely, by testing the statistical significance of differences between Zolvers and non-Zolvers jobs in four job quality indicators—hourly wage, total hours, the

probability of suffering a wage cut during lockdown measures triggered by the pandemic, and the probability of the job surviving such measures.

Table 7. Job quality tests

Variable	Zolvers	Non-Zolvers	Difference	Two-sided p-value	One-sided p-value
Hourly wage	248.2	220.3	27.9	0.1622	0.0811
Hours	7.3	7.1	0.2	0.6636	0.3318
Pay reduced during lockdown	6.6%	8.3%	1.7%	0.5942	0.2971
Survive lockdown	63.9%	56.7%	7.2%	0.0665	0.0332

Source: authors' calculations based on UNGS-AFD survey 2020-2021.

Results show observed differences are not statistically different from zero in two of the four indicators. In hourly wages, the difference is statistically significant but only at the 90% confidence level. For the probability of surviving lockdown, however, the null hypothesis of the test is rejected with 95% confidence. We believe these findings are enough to assert that job effects are most likely uncorrelated to the use of the platform.

Discussion

These findings are relevant both for the academic literature as well as for the public policy agenda in many ways. As the Argentine domestic work sector exhibits a much higher informality rate than the rest of the labor market, public policy has struggled greatly to overcome this difficulty. A great effort was made to raise the formality rate through the combined implementation of different types of strategies including the simplification of bureaucratic processes, tax advantages to employers, and awareness campaigns. As previously shown, their impact was positive and the sector's formality rate experienced a significant increase, mainly due to the fiscal relief policies. However, this improvement seems to have stalled, so it is imperative to find new forms of intervention in order to pierce a ceiling that appears at first glance to be difficult to overcome. Digital labor platforms may offer a new way to increase the formality rate in the domestic work sector by means of the digital services we have explored in this paper. The fact that Zolvers has contributed significantly to formalization indicates that certain business models within the realm of digital platforms that provide domestic work services can indeed carry very positive effects in terms of formalization. Moreover, this formalization effect becomes

more valuable considering that most of the jobs through the platform are of a few hours, a segment that has historically been the most difficult to formalize.

As the results have shown, while the formalization effect is greater with the use of both Zolvers and Zolvers Pagos, it is lower when using Zolvers without Zolvers Pagos. Thus the different tools offered by the platform supporting this effect are crucial. This means, in the first place, that the sole use of the platform to hire domestic work generates a formalization effect. Communication tools and the free service offered for the registration of workers to social security have an influence on this process. Seemingly, the platform's circulation of information on labor rights in the sector and on the benefits of formalizing raises households' awareness of their duties as employers and encourages them to take the first step towards formalization. This evidence reinforces what has been pointed out by the literature regarding the role of digital intermediaries in the formalization of the sector by disseminating information on the applicable law and the procedures to formalize working relationships.

Above this effect, the Zolvers Pagos tool effect is added, showing the greater potential of digital payment interfaces and personnel management services to boost formalization of domestic workers. This form of intervention tackles one of the main obstacles faced by employers: the perceived difficulties related to bureaucratic procedures with which they are not familiar and the time they may require.

A great deal of international literature argues that formalization mechanisms are only effective when they take the form of mandatory requirements on platform users, as optional formalization tools usually fail to overcome traditional reluctance existing among employers and workers alike, usually rooted in lack of information on the process and overstated concerns on costs and risks (Blanchard 2023; Pereyra, Poblete and Tizziani 2023). This viewpoint renders Zolvers a particularly interesting success case as the platform does not make the formalization tool Zolvers Pagos a necessary requirement in the process of contracting the different services provided by the company. As a matter of fact, we have found that the formalization effect is stronger among employers who use Zolvers Pagos, that is, who combine the hiring service with the use of a wallet-type application. This finding suggests that integrating different digital services might be concurrent to progress in the labor market.

On the other hand, we have also shown that Zolvers cannot be considered a representative sample of the domestic service labor market. The platform economy has not yet reached all segments of the labor market, but has concentrated on young, educated workers, and the domestic service sector is not an exception to this general pattern. This means our findings only apply to this specific group of workers—the potential formalization effect of Zolvers on older, less educated workers remains a matter of further research, as the relevance of selection bias in our estimations is unknown. However, we do not believe this undermines the relevance of our findings—in fact, labor formalization is particularly necessary in the younger bracket of the Argentine labor market, which suffers the most from informality and its associated hurdles.

Finally, beyond the contribution that platforms with business models prone to labor formality can make, the role of the State is imperative to achieve complete access for domestic workers to formal jobs. In this regard, the analysis suggests that the provision of services directed to solving employers' bureaucratic obstacles for formal hiring can be very effective. Hence, while the State cannot directly intermediate in working arrangements as platforms do, public policies tailored to facilitate administrative processes are feasible to implement and can take the form of accompaniment and support for households in the procedures for formal hiring.

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