




LABOR UBERIZATION: NAVIGATING FROM INSTABILITY TO OPPORTUNITIES IN THE DIGITAL ERA

UBERIZAÇÃO LABORAL: NAVEGANDO DA INSTABILIDADE ÀS OPORTUNIDADES NA ERA DIGITAL

UBERIZACIÓN LABORAL: NAVEGANDO DE LA INESTABILIDAD A LAS OPORTUNIDADES EN LA ERA DIGITAL

 <https://doi.org/10.56238/isevmjv4n4-007>

Receipt of originals: 06/28/2025

Acceptance for publication: 07/28/2025

Neiva Aparecida Pereira Lopes¹, Valter Gomes², Kátia Elaine dos Santos Avelar³, Maria Geralda de Miranda⁴, Amanda Gomes⁵, Gabriela Gomes⁶ and Daniela Gomes⁷

ABSTRACT

We investigated online job markets through a literature review and qualitative content analysis, using a diverse set of studies on uberization as a basis. Our objective was to analyze and systematize the characteristics of work on platforms, answering specific questions: Which areas of knowledge are exploring the uberization process? What are the main professional activities involved? What are the main impacts generated? The research was conducted on the Capes Periodicals Portal, through the Index (Web of Science), covering national and international articles published from January 2019 to October 2023. The results indicate that uberization is a topic of discussion in several areas of knowledge, with an emphasis on the areas of economics and sociology. In the economic context, various terminologies are used, such as "sharing economy", "collaborative economy", "collaborative consumption", "peer-to-peer economy", "on-demand economy" and "gig economy". This online model is impacting various economic sectors, stimulating investments and reconfiguring competitiveness. In the sociological sphere, linked to the human sciences, the analysis addresses the historical evolution of neoliberalism, culminating in the era of industry 4.0 and the uberization of work. Concepts such as precariousness, dignity, evolution of work, future of work, flexibility and exploitation of workers. Uberization is spreading across several professional categories, including app drivers, education professionals, police officers, doctors, lawyers, recruiters and coaches, presenting both positive and negative impacts of digital platforms. We

¹Doctorate student in Local Development. Augusto Motta University Center (UNISUAM).
E-mail: neivapl@hotmail.com

²Doctorate student in Local Development. Augusto Motta University Center (UNISUAM).
E-mail: valtervieira@ufv.br

³Professor of Graduate Studies. Augusto Motta University Center (UNISUAM).
E-mail: katia.avelar@gmail.com

⁴Professor of Graduate Studies. Augusto Motta University Center (UNISUAM).
E-mail: mgeraldamiranda@gmail.com

⁵Graduated in Medicine. Faculty of Medicine of Petrópolis.
E-mail: amandaggomes0@gmail.com

⁶Undergraduate student in Medicine. Federal University of Minas Gerais (UFMG).
E-mail: gabrielaaggomes@gmail.com

⁷Undergraduate student in Medicine. Faculty of Medical Sciences of Minas Gerais.
E-mail: gomesdaniela170@gmail.com



conclude that urgent regulation of online services, app delivery drivers and other professions is necessary to guarantee labor rights, workplace safety and decent conditions. Technological advances, in turn, prove to be exclusionary for the majority of low-income young people, highlighting the urgency of public policies for digital inclusion starting in basic education. New working conditions will require the acquisition of professional skills aligned with new technologies, while updated regulations will be essential to ensure investments, job creation and protected work opportunities.

Keywords: Uberization. Sharing Economy. Precariousness. Digital Age.

RESUMO

Investigamos os mercados de trabalho online por meio de uma revisão da literatura e uma análise qualitativa de conteúdo, utilizando um conjunto diversificado de estudos sobre a uberização como base. Nosso objetivo foi analisar e sistematizar as características do trabalho em plataformas, respondendo a perguntas específicas: Quais áreas de conhecimento estão explorando o processo de uberização? Quais são as principais atividades profissionais envolvidas? Quais são os principais impactos gerados? A pesquisa foi conduzida no Portal de Periódicos da Capes, por meio do Index (Web of Science), abrangendo artigos nacionais e internacionais publicados de janeiro de 2019 a outubro de 2023. Os resultados indicam que a uberização é tema de discussão em diversas áreas de conhecimento, com ênfase nas áreas de economia e sociologia. No contexto econômico, diversas terminologias são utilizadas, como "economia de compartilhamento", "economia colaborativa", "consumo colaborativo", "economia peer-to-peer", "economia sob demanda" e "gig economy". Esse modelo online está impactando variados setores econômicos, estimulando investimentos e reconfigurando a competitividade. Na esfera sociológica, ligada às ciências humanas, a análise aborda a evolução histórica do neoliberalismo, culminando na era da indústria 4.0 e na uberização do trabalho. Conceitos como precariedade, dignidade, evolução do trabalho, futuro do trabalho, flexibilização e exploração dos trabalhadores. A uberização está se estendendo por diversas categorias profissionais, incluindo motoristas de aplicativos, profissionais da educação, policiais, médicos, advogados, recrutadores e coaches, apresentando impactos tanto positivos quanto negativos das plataformas digitais. Concluímos que a regulamentação urgente dos serviços online, dos entregadores por aplicativos e de outras profissões é necessária para garantir direitos trabalhistas, segurança no trabalho e condições dignas. O avanço tecnológico, por sua vez, evidencia ser excludente para a maioria dos jovens de baixa renda, ressaltando a urgência de políticas públicas de inclusão digital desde a educação básica. As novas condições de trabalho demandarão a aquisição de competências profissionais alinhadas às novas tecnologias, enquanto uma regulamentação atualizada será essencial para assegurar investimentos, a geração de empregos e oportunidades de trabalho protegido.

Palavras-chave: Uberização. Economia do Compartilhamento. Precarização. Era digital.

RESUMEN

Investigamos los mercados laborales en línea a través de una revisión de literatura y un análisis de contenido cualitativo, utilizando un conjunto diverso de estudios sobre la



uberización como base. Nuestro objetivo fue analizar y sistematizar las características del trabajo en plataformas, respondiendo preguntas específicas: ¿Qué áreas del conocimiento están explorando el proceso de uberización? ¿Cuáles son las principales actividades profesionales involucradas? ¿Cuáles son los principales impactos generados? La investigación se realizó en el Portal de Revistas Capes, a través del Índice (Web of Science), abarcando artículos nacionales e internacionales publicados de enero de 2019 a octubre de 2023. Los resultados indican que la uberización es un tema de discusión en diversas áreas del conocimiento, con énfasis en las áreas de economía y sociología. En el contexto económico se utilizan diferentes terminologías, como “economía colaborativa”, “economía colaborativa”, “consumo colaborativo”, “economía peer-to-peer”, “economía bajo demanda” y “economía gig”. Este modelo en línea está impactando diversos sectores económicos, estimulando la inversión y remodelando la competitividad. En el ámbito sociológico, vinculado a las ciencias humanas, el análisis aborda la evolución histórica del neoliberalismo, culminando en la era de la Industria 4.0 y la uberización del trabajo. Conceptos como precariedad, dignidad, evolución del trabajo, futuro del trabajo, flexibilidad y explotación de los trabajadores. La uberización se está extendiendo a varias categorías profesionales, incluidos conductores de aplicaciones, profesionales de la educación, agentes de policía, médicos, abogados, reclutadores y entrenadores, y presenta impactos tanto positivos como negativos de las plataformas digitales. Concluimos que es necesaria una regulación urgente de los servicios en línea, los conductores de reparto basados en aplicaciones y otras profesiones para garantizar los derechos laborales, la seguridad en el lugar de trabajo y condiciones de trabajo decentes. El avance tecnológico, a su vez, resulta excluyente para la mayoría de los jóvenes de bajos ingresos, lo que pone de relieve la urgencia de políticas públicas de inclusión digital desde la educación básica. Las nuevas condiciones de trabajo requerirán la adquisición de habilidades profesionales alineadas con las nuevas tecnologías, mientras que las regulaciones actualizadas serán esenciales para asegurar la inversión, la creación de empleo y oportunidades de empleo protegido.

Palabras clave: Uberización. Economía Colaborativa. Precariedad. Era Digital.



1 INTRODUCTION

The ILO's Centenary Declaration emphasizes the need to direct efforts to develop effective policies that promote full and decent employment, with a focus on the transition from education to work, especially for young people (ILO, 2020). The report addresses a crucial moment, highlighting the Sustainable Development Goal 8 target to substantially reduce the proportion of NEETs (not in employment, education or training) and to develop a global strategy for youth employment (UN, 2015). In the face of challenges such as the sluggish global economy, geopolitical tensions and crises, youth labour markets face difficulties, exacerbated by recent epidemics. The report highlights the impact of technological advances on youth labor markets, analyzing opportunities and risks related to job creation and destruction, the use of digital technology in employment programs.

In contemporary times, society and, consequently, organizations are immersed in the so-called information age, a period characterized by the incessant flow of data. These procedures are predominantly shaped by the advancement of new Information and Communication Technologies (ICTs). Information systems in the organizational environment are interconnected elements that play crucial roles in the collection, processing, storage and distribution of information, aiming to support decision-making processes and facilitate control in organizations (GURINA *et al.*, 2020).

In fact, information systems primarily aim to optimize efficiency and reduce the operating costs of companies. This implies, undoubtedly, a constant need for adaptation and flexibility on the part of workers, given that these systems evolve at a fast pace and are promptly replaced by more modern solutions (SANTOS DA SILVA *et al.*, 2022). The digital economy has a wide-ranging impact on all aspects of human life, promoting significant changes in the business landscape by reducing the effectiveness of traditional management approaches and methods, while creating new opportunities for development in contemporary conditions for companies (SHCHERBAKOVA, 2019).

In this context, the worker is inserted in a new management model, in which his workforce is characterized as part of the phenomenon known as "uberization", a trend that is seen as susceptible to generalization in labor relations. Originating from modern practices of suppression of rights, transfer of risks and costs to workers, as well as new productive arrangements, this approach encapsulates, to a certain extent, processes that have been developing over decades, while projecting itself as a direction for the future of work (PELEGRINO, 2020; RODRIGUES; WOLKMER; MENEZES, 2022). The theme



gains prominence with the formation of extensive contingents of workers subject to the control of companies that operate through digital platforms.

The contemporary challenge in the face of this new organizational model involves intricate elements. It consists of perceiving digital platforms as a powerful means by which labor relations undergo restructuring, without, however, succumbing to a technological determinism that obscures the social processes shaped by decades of flexibilization and transformation in the labor environment, processes that are materialized through digital platforms. From this perspective, the challenge also focuses on understanding a trend that precedes and transcends the digital platforms themselves, related to the core of "uberization": the consolidation and management of multitudes of workers, known by various names in the literature, such as just-in-time workers, *gig economy*, sharing or collaborative economy, on-demand work, digital work, platformization, among others (ABÍLIO, 2019; ABÍLIO, 2021; ZAMAN *et al.*, 2020; VÁSQUEZ-GARAYA; MUNAYCO-APOLAYA; UGARTE, 2021).

Gomez and Thedim-Costa (1999) outlined the expressions of the precariousness of work that impacted various segments of the Brazilian population at the end of the twentieth century. Regarding working conditions in the era of uberization, they are described as labor flexibility, job insecurity, outsourcing, labor autonomy or entrepreneurship.

The literature also addresses the conditions of workers, maintaining their centrality in the forms of capitalist exploitation, as conceived by Marx and relating to the so-called Fourth Industrial Revolution. The uberization of the economy is prone to intensify the contradictions between capital and labor; warnings about job losses associated with the convergence of robotization, large-scale digitization of data, biotechnology, and artificial intelligence indicate that the tensions and complexities arising from the reduction of labor factors will lead to a more challenging world of work (HUGHES; SOUTHERN, 2019).

In this context, the purpose of this study is to analyze the characteristics of uberization. What areas of knowledge are studying uberization? What are the main professional activities involved? What are the main impacts generated?

It is essential to understand the implications of uberization, as the current scenario reconfigures its elements, demanding the understanding of the persistent characteristics, transformations, and trends that emerge in the present. In addition, it is essential to anticipate possible futures in the labor context, considering that the impacts of new



technologies on the workforce of the twenty-first century have parallels in historical changes that have occurred in different eras.

2 METHODOLOGY

The literature review adopted criteria for identification, selection and elaboration of texts in order to determine the analyzed works by the initial objectives of the analysis and by the application of an explicit selection method (CASSUNDÉ; BARBOSA; MENDONÇA, 2018). Focusing on the term "Uberization", it was decided to search and select articles on the Capes Journal Portal, since the portal brings together several academic databases of scientific articles.

The selection of articles took place between October 5 and 20, 2023, using the term "Uberization" as a search keyword. The selected articles were published from January 2019 to October 2023. Through the filters of the Capes Journals portal in the Index (*Web of Science*), 67 articles were identified.

The titles and abstracts were analyzed by two researchers based on the inclusion criteria, which considered the presence of the term "Uberization/Uberization" in the title, abstract, and keywords. Articles that were not published in peer-reviewed scientific journals, such as journal editorials, thesis abstracts, book reviews, and duplicate texts, were excluded.

After the analysis, 50 articles were selected and submitted to a qualitative thematic analysis (BRAUN; CLARKE, 2006) with the objective of identifying how the term "Uberization" was used and what its meaning is according to the context of discussion of each work, as presented below.

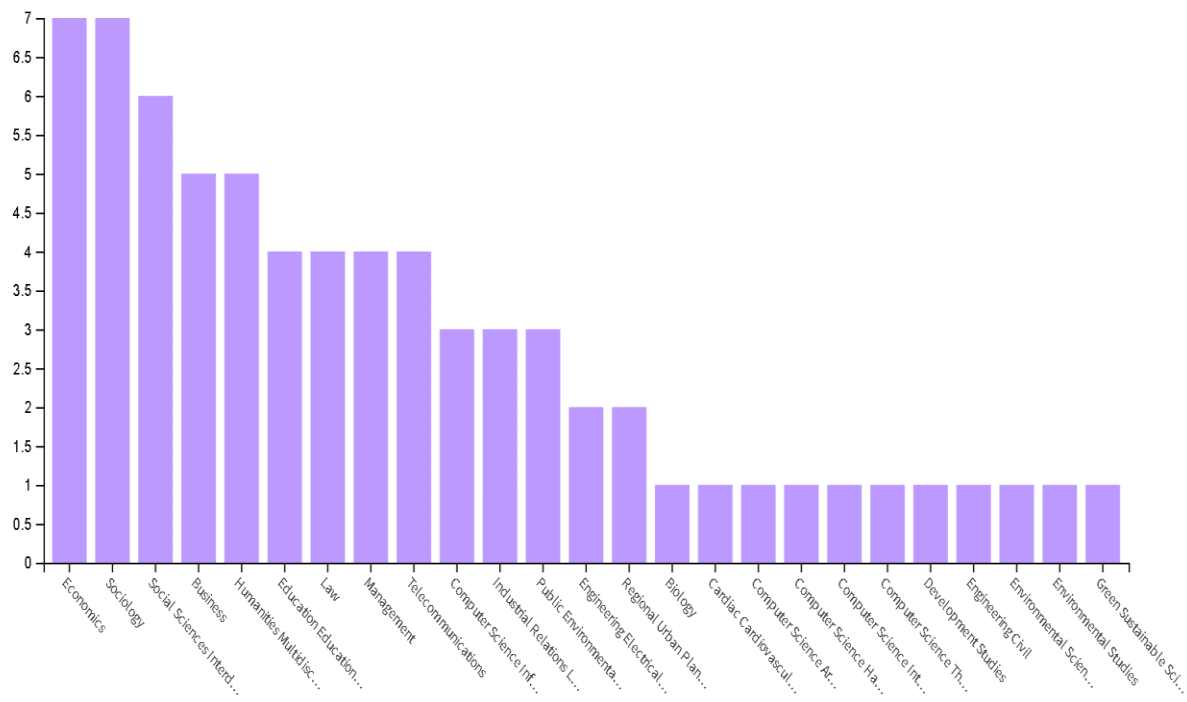
3 RESULTS AND DISCUSSION

From the chosen articles, it was possible to carry out three types of classification. Initially, the main areas of knowledge that guide uberization will be explored. In the second approach, the main actors related to the literature linked to uberization in their respective professional categories will be presented. The third approach focuses on the impacts of uberization in contemporary times.

3.1 MAIN AREAS OF KNOWLEDGE THAT ADDRESS UBERIZATION

The term "Uberization" has been discussed in the literature in the most diverse areas of knowledge. Figure 1 presents 25 different areas among the 50 selected articles.

Figure 1
Areas of Knowledge



Source: Prepared by the authors, 2023.

The areas of economics and sociology stand out. In the economic sphere, the most mentioned terminology is the "Sharing Economy", a term used in the last ten years to describe a new dynamic of production and consumption made possible by digital organizational models (MONT *et al.*, 2020). This expression began to gain visibility in the United States media in 2013, covering several realities, such as the "collaborative economy", "collaborative consumption", the "*peer-to-peer economy*", the "*on-demand economy*" and the *gig economy* (ROBERTS, 2015).

It is observed that uberization has become a topic of multidisciplinary interest, as it covers the market economy, making use of new information and communication technologies. This phenomenon, intensified by the Covid-19 pandemic, also impacts the

labor market, interferes in the management of companies and, consequently, in the life of society as a whole.

Gurina *et al.* (2020) addressed the development trends of global companies in the era of Uberization as a management model. They examined changes in the list of the largest corporations in the S&P 500, identifying reasons for changes in the ranking. The study analyzed the strategic tools of change leaders in the context of the growing dominance of digital platforms. The authors highlighted the active use of Uberization in Russia in the sectors of online trading, recruitment, travel, healthcare, small and medium-sized enterprises, commerce, banking, and insurance. Market technology is seen as an effective way to expand products without increasing costs, turning companies into market-based supermodels. This impacts several sectors, stimulates new investors and creates opportunities, changing the competitive landscape.

Shcherbakova (2019) explores the transformations in the service industry in the digital age. The digital economy impacts various aspects of life, promoting significant changes in business and presenting new opportunities for development. The study highlights the influence of digitalization on the activities of the service sector, underscoring the inevitable need to adapt to business models based on digital technologies. The competitive future of service companies will depend on the effective integration of digital technologies and human creativity. The study also highlights the creation of new business models and the mechanisms of the sharing economy, offering additional benefits to companies in the service sector.

In the context of sociology, which is interconnected with the disciplines of the human sciences, the discussion addresses the historical evolution of neoliberalism, culminating in the era of industry 4.0 and the uberization of work.

Andrade (2022) initially addresses the historical emergence of neoliberalism in Brazil, recognizing the emergence of dispersed and disjointed elements during the Military Dictatorship, which only acquired strategic coherence as a whole, constituting the governmentality device in the 1990s. From that point on, three historical phases of neoliberalization occurred: 1) integration into global commercial and financial markets and managerial reform of companies and the State; 2) emergence of the "new middle class" as an object of power and knowledge; 3) response to the economic crisis of 2015, with the intensification of neoliberal reforms and the uberization of work.

Festi (2020) offers critical analyses on sociology and the automation of work. The



author explores the perspective of the sociology of labor that anticipated autonomy in industrial automation, as well as the idea that industry would transform some workers into new artisans. Faced with the impossibility of aligning the demands of employment and profit in a healthy way, the platform economy reproduces traditional elements of capitalism under new names, achieving a broader, more efficient and precise control.

Hughes and Southern (2019) reflect on the world of work and the crisis of capitalism in light of the ideas of Marx and the Fourth Industrial Revolution. It highlights Marx's initial clarity on the position of technology in the means of production, considering the machine as a distinct entity that does not equate with individual labor. In the contemporary context of the Fourth Industrial Revolution, which reshapes the world of work, the analysis is inserted in the crisis of capitalism and the tendency towards objectified work. Automation, or the "Uberization" of the economy, is seen as a factor that can intensify the contradictions between capital and labor. The prospect of a post-capitalist or post-work era is considered in the face of warnings about job losses due to the convergence of technologies such as robotization, digitization of large volumes of data, biotechnology and artificial intelligence. The study, grounded in Marx's work, seeks to stimulate ideas to investigate and analyze the impact of the Fourth Industrial Revolution on work, highlighting how the neutrality of technologies continues to be socially shaped.

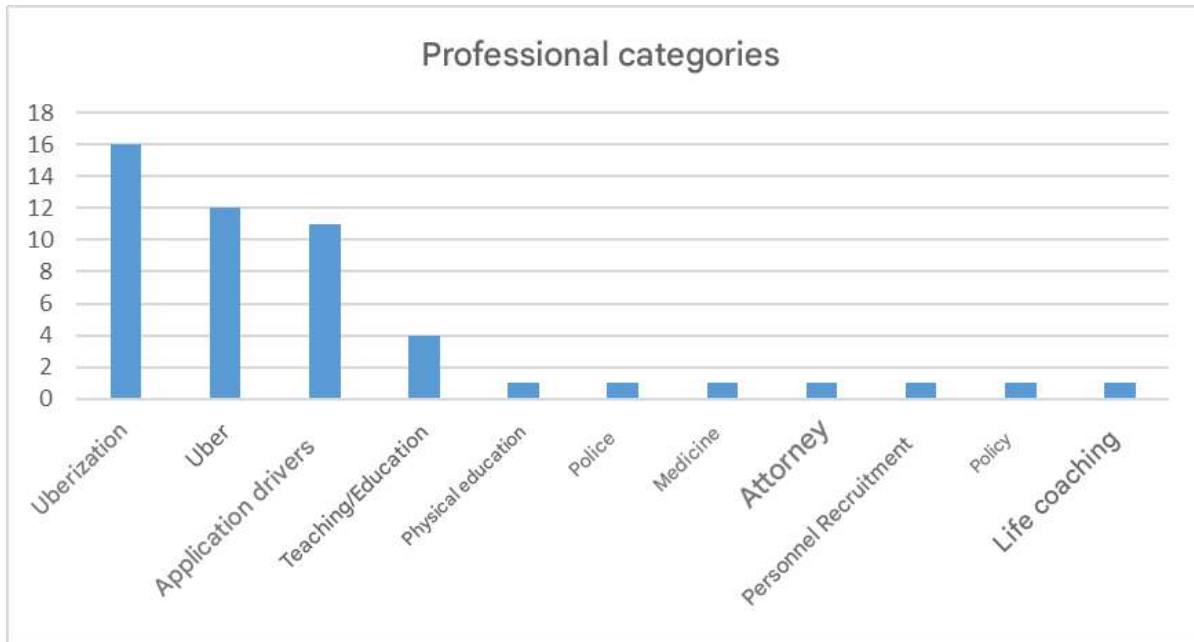
Degrise (2019) questions whether we are facing a technological disruption or a social abandonment. His study addressed the connection between technological innovation, changes in business (and management) models, and the evolution of work throughout the history of technological change. It explored debates on the transformation of employment, highlighting similarities with current issues about the future of work, such as the impacts of robotization, "uberization" and digital transformation. It considers the possibility of the platform economy eliminating companies in their current form, identifying trends common to a new business model that is positioned between the hierarchical company and the market. He closes his reflection with the question: instead of focusing on the threat of a jobless future, shouldn't we start considering the threat of a future without a boss?

3.2 MAIN PROFESSIONAL ACTORS RELATED TO UBERIZATION

With regard to the professional categories addressed in the selected articles, Figure 2 shows the results of the search.

Figure 2

Professional categories



Source: Prepared by the authors, 2023.

The articles chosen addressed ten different professional categories. Sixteen studies mentioned uberization in a general context, without reference to a specific category. They discussed the forms of work on digital platforms and their both positive and negative impacts on the labor market, as well as exploring the historical context and neoliberalism, among other approaches that will be detailed in the next topic. Next, the professional categories will be presented along with the main discussions found in the researched literature.

It is noteworthy that twelve articles addressed professionals who work in transport app companies, such as Uber and Lyft. Vignon, Yin, and Ke (2023) analyzed the regulation of the driver market in the era of uberization, proposing a model to balance the competition. The entry of ride-sharing companies such as Uber and Lyft into the ride-hailing market has raised concerns about unfair competition with traditional taxi services. The authors highlighted the lack of regulatory measures to address this problem, which resulted in suspension or restriction of services. They proposed a model of competition between services and investigated the creation of efficient regulation to achieve social efficiency. The model suggests the use of an *e-hailing* platform, showing that in the absence of restrictions, the *streethailing* company has a price advantage in dense markets or short trips. Despite competition and congestion, regulators would only need



to regulate the commission per trip to maximize the social surplus, offering a possible simplification of regulations in the private transport market.

Eleven studies addressed drivers who work in apps, specifically app delivery workers. Dutra and Sepúlveda (2020) examined the work of these drivers, known as *delivery drivers*, from the perspective of the deconstruction of labor rights. The emergence of delivery apps, such as *Rappi*, *Glovo*, *Uber Eats* and *iFood*, challenges labor law not only by suppressing rights or making working conditions more flexible, but also by denying the employment relationship. The platforms present themselves only as intermediaries between app users and delivery workers, without supposedly establishing employment relationships. Faced with this reality, the challenge is to rethink the categories of the subject of labor law and the labor relationship, based on the fundamental right to decent work, aiming to contribute to the resistance of the labor field to the phenomenon of uberization.

Four articles address the new reality of teachers and reflect on uberization in Education. Díez-Gutiérrez (2021) discusses the advance of *EdTech capitalism* in the definition of global educational policies. The author analyzes the neoliberal logics introduced in educational systems, highlighting the inevitable emergence of digital education promoted by large technological corporations in response to the COVID-19 pandemic. The discussion covers the digital governance introduced by *BigTech* in education, exploring public subordination and dependence on the private, questioning whether this leads to a progressive phenomenon of uberization in education. The conclusion highlights the need to "socialize the cloud," putting new means of digital production in the hands of the public to move toward educational digital democracy, rather than resisting digitalization.

The other professional categories are linked to specific articles, but it is relevant to present these studies to analyze the extent of uberization in the current labor market.

Carvalho, Freitas, and Akerman (2021) address the performance of Physical Education professionals during the Covid-19 pandemic, highlighting the relevant role of physical activity in the Public Health agenda. The authors discuss the 'new normal' in physical activity and health, addressing the coexistence of two pandemics - sedentary lifestyle and Covid-19 - and the perspective of the uberization process. They emphasize the need to expand the practice of physical activities, but warn of caution regarding the discourse that promotes an active life at any cost. On the other hand, they question the



potentially negative impacts of uberization on Physical Education workers and professionals, without guaranteeing the desired expansion. The 'new normal', analytically situated to June 2020, reinforces the importance of reducing health inequalities to promote healthy lifestyles, including physical activity.

For Sandhu and Fussey (2021), predictive policing refers to the use of technologies to predict crimes in likely places and people. The supposed benefits focus on the ability to automate police decisions, allowing for preventive policing. However, there is little understanding about users' experiences in the field. The qualitative study presents findings from UK law enforcement organizations involved in the testing of predictive software. The results indicate that many police officers are aware of the limitations, such as errors in the data, leading to skeptical attitude and reluctance to use these technologies. It is concluded that claims about the neutralization of police subjectivity by predictive software ignore the ongoing struggles of officers to assert their agency and mediate the reliability and use of predictions.

Yehoshua *et al.* (2019) described the use of the *Maccabi RED* app for semi-urgent medical care in primary care settings. The app aims to avoid unnecessary visits to the emergency room, optimizing patients' time and reducing the burden on emergency services. The system connects patients to a network of 600 *HMO Maccabi* doctors to treat minor trauma and provide semi-urgent medical care. Patients undergo clinical screening, and the application locates a doctor available in the network. The results from December 2017 to July 2019 showed 4,804 cases treated by the *Maccabi RED network*, covering several medical areas. 70% of the cases had a doctor available nearby, with an average time of care of 1.1 hours from referral. They concluded that the system provides benefits by offering a real-time community solution to semi-urgent medical needs, optimizing the use of community medical clinics, providing immediate treatment with fewer complications and patient satisfaction, and reducing physician burnout.

Thornton (2021) points out that, around the year 2000, Australia was a pioneer among common law countries in the liberalization of legal practice with radical reforms, such as the ownership of companies by non-lawyers and listing on the stock exchange. Technological innovations, including remote work, digitized platforms, and artificial intelligence (AI), are significantly transforming legal practice. Driven by profit maximization, these reforms raise questions about the core values of legal professionalism. The author provided an overview of these reforms, based on a small



study of *NewLaw* firms in Australia and the UK, highlighting how the "Uberisation" of contemporary legal practice is contributing to a new incarnation of post-professionalism, driven by Covid-19.

Allal-Cherif, Aránega, and Sánchez (2021) examined the benefits of smart recruitment, using artificial intelligence to identify, select, and retain talent globally. The research addresses how digital technologies improve the successive phases of recruitment, from identifying candidates on social networks to matching candidate to job through artificial intelligence. These technologies are especially useful for social businesses looking to recruit employees who align not only with qualifications, but also with behaviors and values that match their mission. The methodology involves participant observation and qualitative data collection through multiple case studies. The results, coming from the analysis of various recruitment technologies such as *LinkedIn*, *Udacity*, *L'Oreal's Reveal game*, *TextRecruit's Ari chatbot*, and *Randstad.tech's* massive data matching system, are discussed in terms of performance, limits, and convergence for an "uberization" of recruitment. Management recommendations are presented to support the adoption of e-recruitment.

The presence of uberization in politics was examined by Sergueieva *et al.* (2019), which analyzed gamification in civic and political participation practices. The research identified questions about the problems and perspectives of this trend of social inclusion. Gamification offers a new experience for political actors, including leaders, political consultants, and representatives of the masses. Cases related to the mechanisms of play in public participation, immersive journalism and the use of digital resources by political technologists in electoral campaigns were highlighted. The analysis revealed that the success of these practices is influenced by political will, the coordination of the local social structure, the autonomy and financial capacities of political organizations interested in civil participation, and the design of the participation process. Examples of immersive journalism and *newsgames* in the Russian reality were discussed, such as "*Lentach*" and "*Meduza*", actively used by politicians and political technologists at the federal and regional levels. The process after the municipal elections in Moscow was called "uberization of politics" or "politics without barriers", based on the principle of "open doors". The authors explored the political technologies on the Internet and the most popular services in political consulting in contemporary Russia.

Aboujaoude (2020) expressed concerns about *life coaches* in the age of

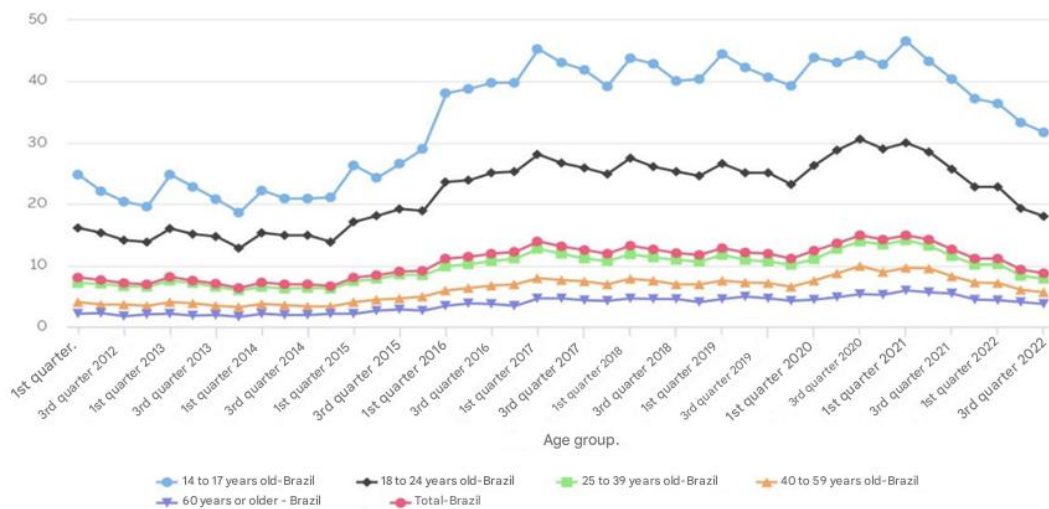
In Figure 3, the most prominent word is "uberization", which is expected, considering that the selection of articles was based on the keyword "uberization". The second most frequent word is "work", covering topics such as working conditions, job insecurity, digital work, dignity at work, labour market, work culture, work organisation, work evolution, contemporary work, future of work, motivation and satisfaction at work, work flexibility, and online labour market. The following are some articles, as examples found in the research.

In general, studies portray uberization as a model that negatively impacts workers, highlighting a high workload and the absence of minimum labor regulation, resulting in a lack of protection for workers, who are treated as self-employed or entrepreneurs.

Lima and Sales (2022) address the reality of Brazilian youth in the midst of the uberization of the labor market. In the last five years, Brazil has undergone significant transformations in the labor scenario, marked by flexibility and informality, resulting in the weakening of conquered rights. Transportation and delivery apps have emerged as an important gateway for low-income youth into the job market. The authors explore how this work model, characterized by flexibility and informality, impacts Brazilian youth, highlighting its relationship with the overexploitation of labor. Figure 4 shows the unemployment rate by age and by quarter in Brazil from 2012 to 2022.

Figure 4

Unemployment rate, by age, 1st quarter of 2012 to 3rd quarter of 2022 (in %)



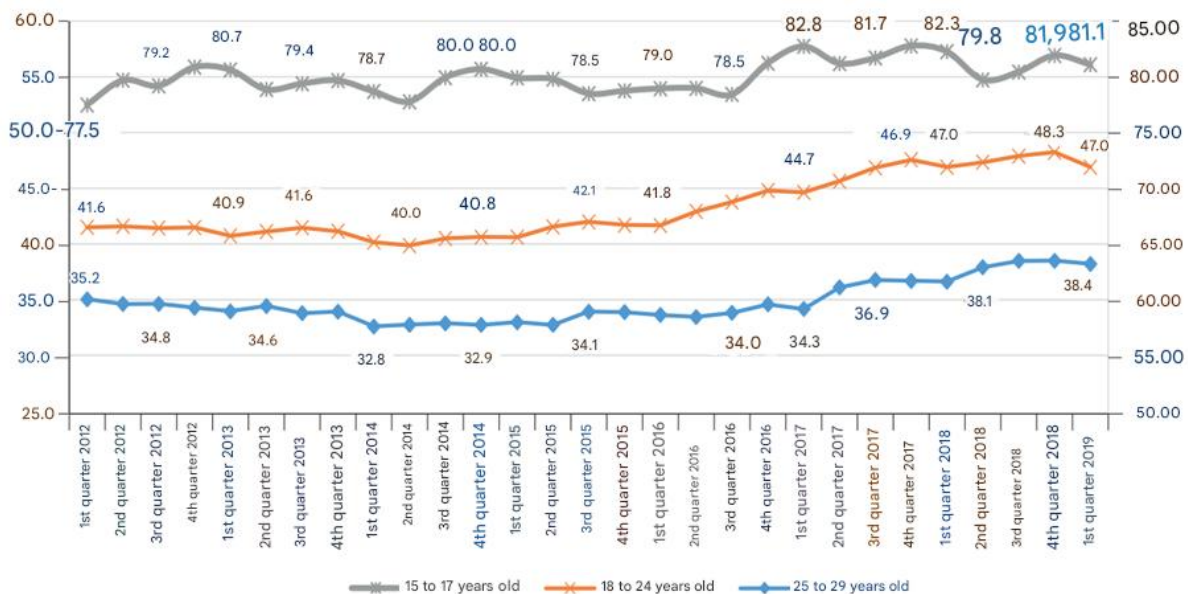
Source: IBGE (2012 -2022) – Semiannual Continuous National Household Sample Survey. https://www.ibge.gov.br/statistics/social/labor/9173-national-survey-by-sample-of-households-continues-trimestral.html?=&t=series-historical&utm_source=landing&utm_medium=explica&utm_campaign=unemployment.

Figure 4 indicates that unemployment rates mainly affect groups of young people between 14 and 24 years of age. Specifically, in the case of young people aged 14 to 17, the unemployment rate, which was already above the national average, showed a continuous increase from 2016 onwards, starting to decline in 2021.

With the high unemployment rate, young people become the main participants in informal jobs. In São Paulo, in 2019, almost nine out of ten young people were employed informally (TUON, 2019). Informal jobs become a faster way to earn a living, particularly for personal consumption and that of their families, meeting material needs. Young people from lower economic classes are particularly affected by this reality. Figure 5 presents the informality rate in the young population in the country in isolation.

Figure 5

Informality rate of young people by age group. Q1 2012 to Q1 2019 (in %)



Source: Continuous PNAD/IBGE. Elaborated by: IPEA and International Labor Organization (2019: 20).

Many young people find delivery and transport apps as their only source of livelihood. The "uberization" of work, especially through these apps, has physical and psychological impacts. Workers are placed in the position of supposed "owners" of themselves, always available for work in search of additional earnings, without an effective link with the company, which considers them more as customers or employees. Those involved in these dynamics face exhausting routines, the fear of accidents, the pressure to achieve goals, in addition to the fear of negative evaluations that can result



in blockages, depriving them of the only source of income to support themselves and their families (LIMA; SALES, 2022).

Oliveira *et al.* (2023) examined the working conditions of drivers at Uber and other platforms. These professionals have flexible working hours, often choosing variable hours, face risks of drowsiness due to long hours, damaging health and increasing the risk of accidents. They recommend implementing strategies, such as limits on working hours and periodic alert assessments, to address these issues effectively and in compliance with labor rights.

Uberization, in turn, opens doors to significant opportunities. The main strategic drivers in business are concentrated in the realm of digital platforms, requiring constant innovation of new products, business models and innovative approaches in customer service. Studies have revealed that the uberization process is actively present in several areas, such as staff recruitment and consulting, the travel sector, medical services, small and medium-sized enterprises, commerce, banking, and insurance. This technological transformation is pertinent to a wide range of industries, as it offers an effective way to expand the offer without increasing costs. This results in the expansion of points of sale, improved logistics opportunities, and a substantial growth in the customer base, impacting all sectors of the economy. This dynamic creates new markets of opportunity and redefines the competitive landscape (GURINA *et al.*, 2020).

The Maccabi RED app innovates in the field of medicine by offering a search and matching system for urgent care, benefiting patients and physicians alike. This system provides treatment for specific minor traumas and semi-urgent medical services (YEHOSHUA *et al.*, 2019). Kieling *et al.* (2021) highlighted the importance of telemedicine during the pandemic. This approach makes it possible to cross boundaries for medical consultations and diagnoses, and is widely adopted by physicians during the COVID-19 pandemic to maintain social distancing and provide care to patients diagnosed with the disease. The results show the effectiveness of telemedicine, being approved by doctors and patients. In addition, telemedicine plays a crucial role in serving communities that are isolated or far from medical centers.

Shcherbakova (2019) highlights the impact of digitalisation on service companies, underlining the inevitability of digitally driven transformation. The study explores the design of new business models and the mechanisms of the sharing economy, providing innovative advantages for companies in the service sector. In turn, Vieira (2021)



conducted a survey with young people in the city of Aracaju-SE. The results revealed that informal self-entrepreneurship among young people, analyzed in this study, predominantly arises out of necessity, resulting from socioeconomic conditions such as low education and unemployment, and also from the desire to achieve autonomy and independence at work. The young people interviewed demonstrate satisfaction in their self-entrepreneurial activities and maintain optimism about the future, even in the face of the precarious characteristics identified and the difficulties reported.

Graglia and Lazzareschi (2018) sought not only to highlight one of the negative effects most feared by workers, such as the increase in unemployment, but also to highlight, mainly, the possibilities of a promising future for all humanity. This future is envisioned by definitively getting rid of repetitive, simplified and insignificant tasks that currently prevent the full realization of human potentialities, such as intelligence, creativity, critical spirit and initiative. As technologies advance, new jobs will emerge. Therefore, it is imperative to implement public policies in education to ensure the inclusion of everyone in this digital age, since the impact covers the three sectors of the economy, providing opportunities, but which, by their nature, are not automatically inclusive.

Garcia and Noury (2021) question the ability of digital labour platforms to constitute a sustainable alternative to the traditional management model and salaried work. They emphasize the need to address the organizational sustainability of these platforms, proposing a specific reflection on their cognitive capacities. They introduce the concept of 'cognitive sustainability', referring to the ability of platforms to integrate, preserve and create knowledge. The authors suggest exploring activities that platforms can perform in a cognitively sustainable way and advocate the possibility of further hybridization of these platforms to deal with more complex activities.

Baldoví and Alonso (2020) explore the impact of the use of digital devices, especially digital platforms, in schools and whether it results in the development of a technological culture among teachers. The study, carried out in four primary schools, analyzes the consequences of this phenomenon on the organizational restructuring of schools and on the teaching work. The research, based on in-depth interviews with teachers, management teams and school leaders, categorizes technological culture into four dimensions: classroom practices, educational innovation, professional identity and axiological components. The results indicate that school agents adopted the principles of school culture to support classroom practices aligned with the concept of uberization,



without perceiving ideological or technical conflicts.

The reversal of what is called the "new farewell to the working class" can be made possible through the regulation of these apps, establishing minimum standards of rights for workers (FILGUEIRAS; CAVALCANTE, 2020). As pointed out by Filgueiras and Antunes (2020), companies have wide access to information and technological resources that could facilitate the comprehensive regulation of these workers. The possible reason for not adopting this approach may lie in the fact that, in addition to not being in the interest of the big capitalists to favor the workers, these large corporations are also not usually the target of charges in this sense.

4 FINAL CONSIDERATIONS

This study sought to identify the characteristics of uberization through a literature review, highlighting its comprehensive discussion in the areas of economics and sociology. In the economic sphere, various terminologies are used, such as "sharing economy", "collaborative economy", "collaborative consumption", "*peer-to-peer* economy", "on-demand economy" and "*gig economy*", and this online model is impacting several economic sectors, stimulating investments and reconfiguring competitiveness.

In the sociological sphere, linked to the human sciences, the analysis addresses the historical evolution of neoliberalism, culminating in the era of industry 4.0 and the uberization of work, relating it to concepts such as precariousness, dignity, evolution of work, future of work, flexibilization and exploitation of workers.

The study reveals that uberization is expanding to several professional categories, such as app drivers, education professionals, police officers, doctors, lawyers, recruiters, and *coaches*. Examples of positive and negative impacts of digital platforms are presented.

It is concluded that we are at the beginning of the digital age, and it is crucial that human relations are discussed and that governments adopt effective measures to create legislation that protects these professionals, avoiding precariousness and overexploitation, especially among young people.

The need for regulation of online services, app delivery workers, and other professions is evident, to ensure labor rights, safety at work, and decent conditions. Technological advancement, in turn, proves to be exclusionary for most low-income young people, highlighting the urgency of public policies for digital inclusion from basic



education. The new working conditions will require the acquisition of professional skills aligned with new technologies, while an updated regulation will be essential to ensure investments, job creation and sheltered work opportunities.

REFERENCES

- Abílio, L. C. (2019). Uberização: Do empreendedorismo para o autogerenciamento subordinado. *Psicoperspectivas*, 18(3), 41–51. <https://doi.org/10.5027/psicoperspectivas-vol18-issue3-fulltext-1702>
- Abílio, L. C. (2021). Empreendedorismo, autogerenciamento subordinado ou viração? Uberização e o trabalhador just-in-time na periferia. *Contemporânea – Revista de Sociologia da UFSCar*, 11(3), 933–955. <https://doi.org/10.4322/2316-1329.2021110308>
- Aboujaoude, E. (2020). Where life coaching ends and therapy begins: Toward a less confusing treatment landscape. *Perspectives on Psychological Science*, 15(4), 973–977. <https://doi.org/10.1177/1745691620902136>
- Allal-Chérif, O., Aránega, A. Y., & Sánchez, R. C. (2021). Intelligent recruitment: How to identify, select, and retain talents from around the world using artificial intelligence. *Technological Forecasting and Social Change*, 169, Article 120822. <https://doi.org/10.1016/j.techfore.2021.120822>
- Andrade, D. P. (2022). Rodadas históricas de neoliberalização no Brasil. *Contemporânea – Revista de Sociologia da UFSCar*, 12(3), 675–708. <https://doi.org/10.4322/2316-1329.2022120302>
- Baldoví, M. I. P., & Alonso, A. S. M. (2020). Tecnologías y cultura organizativa en los centros escolares. ¿La uberización de las relaciones laborales? *Píxel-Bit. Revista de Medios y Educación*, 58, 161–179. <https://doi.org/10.12795/pixelbit.78423>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Carvalho, F. F. B. de, Freitas, D. D., & Akerman, M. (2021). O “novo normal” na atividade física e saúde: Pandemias e uberização? *Movimento*, 27, Article e27022. <https://doi.org/10.22456/1982-8918.108022>
- Cassundé, F. R. D. S., Barbosa, M. A. C., & Mendonça, J. R. C. (2018). Entre revisões sistemáticas e bibliometrias: Como tem sido mapeada a produção acadêmica em Administração no Brasil? *Informação & Informação*, 23(1), 311–334. <https://doi.org/10.5433/1981-8920.2018v23n1p311>
- Degryse, C. (2019). Disrupción tecnológica, ¿abandono social? *El Trimestre Económico*, 86(344), 1115–1147. <https://doi.org/10.20430/ete.v86i344.847>



- Díez-Gutiérrez, E. J. (2021). Gobernanza híbrida digital y Capitalismo EdTech: La crisis del COVID-19 como amenaza. *Foro de Educación*, 19(1), 105–133. <https://doi.org/10.14516/fde.883>
- Dutra, R. Q., & Sepúlveda, G. (2020). O trabalho nos aplicativos de entrega de mercadorias: A desconstrução do sujeito de direitos trabalhistas. *REI – Revista Estudos Institucionais*, 6(3), 1230–1252. <https://doi.org/10.21783/rei.v6i3.467>
- Festi, R. (2020). Contribuições críticas da sociologia do trabalho sobre a automação. In R. Antunes (Ed.), *Uberização, trabalho digital e Indústria 4.0* (pp. 1–20). São Paulo, Brazil: Boitempo.
- Filgueiras, V., & Antunes, R. (2020). Plataformas digitais, uberização do trabalho e regulação no capitalismo contemporâneo. *Revista Contracampo*, 39(1), 27–43. <https://doi.org/10.22409/contracampo.v39i1.40966>
- Filgueiras, V., & Cavalcante, S. (2020). O trabalho no século XXI e o novo adeus à classe trabalhadora. *Princípios*, 39(159), 11–41.
- Garcias, F., & Noury, L. (2021). What are the boundaries to the expansion of digital labour platforms? Understanding uberization through a cognitive sustainability lens. *M@n@gement*, 24(4), 36–48. <https://doi.org/10.37725/mgmt.v24i4.8248>
- Gomez, C. M., & Thedim-Costa, S. M. da F. (1999). Precarização do trabalho e desproteção social: Desafios para a saúde coletiva. *Ciência & Saúde Coletiva*, 4(2), 411–421. <https://doi.org/10.1590/S1413-81231999000200012>
- Graglia, M. A. V., & Lazzareschi, N. (2018). A Indústria 4.0 e o futuro do trabalho: Tensões e perspectivas. *Revista Brasileira de Sociologia*, 6(14), 109–151.
- Gurina, M. A., Romyantseva, Y. V., Liberman, T. I., & Shchetinina, I. S. (2020). Leaders of change key strategic instruments: Marketplaces as the basis of the uberization model for managing global companies. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 11(2), 1–12. <https://doi.org/10.14456/ITJEMAST.2020.24>
- Hughes, C., & Southern, A. (2019). The world of work and the crisis of capitalism: Marx and the Fourth Industrial Revolution. *Journal of Classical Sociology*, 19(1), 59–71. <https://doi.org/10.1177/1468795X18788067>
- International Labour Organization. (2020). *Global employment trends for youth 2020: Technology and the future of jobs*. Geneva, Switzerland: International Labour Office.
- Kieling, D., da Silva, D., Witt, F., & Magnagnagno, O. (2021). A importância da telemedicina no contexto da pandemia de Covid-19. *Fag Journal of Health*, 3(1), 90–97. <https://doi.org/10.35998/fjh.v3i1.139>
- Lima, E., & Sales, M. V. (2022). Situação da juventude brasileira num contexto de extrema flexibilização, “uberização” e desemprego. *Revista Crítica de Ciências Sociais*, 129, 131–152. <https://doi.org/10.4000/rccs.12963>



- Mont, O., Palgan, Y. V., Bradley, K., & Zvolška, L. (2020). A decade of the sharing economy: Concepts, users, business and governance perspectives. *Journal of Cleaner Production*, 269, Article 122215. <https://doi.org/10.1016/j.jclepro.2020.122215>
- Oliveira, V. N., Costa, T. G., Andrade, M. S., Vancini, R. L., Weiss, K., Knechtle, B., Narciso, F. V., Rosa, J. P. P., & Lira, C. A. B. (2023). Possible effects of uberization on the quality of sleep of professional drivers. *Chronobiology International*, 40(2), 199–203. <https://doi.org/10.1080/07420528.2022.2151814>
- Organização das Nações Unidas. (2015). *Transformando nosso mundo: A Agenda 2030 para o Desenvolvimento Sustentável* (UNIC Rio, Trans.). New York, NY: Author.
- Pelegriño, H. (2020). Pacto édipano e pacto social (da gramática do desejo à vergonha brasileira). *Psicanálise e História*, 22(3), 279–290.
- Roberts, J. J. (2015, July 29). As sharing economy fades, these 2 phrases are likely to replace it. *Fortune*. Retrieved November 21, 2023, from <https://fortune.com/2015/07/29/sharing-economy-chart/>
- Rodrigues, S. R. V., Wolkmer, M. de F. S., & Menezes, M. de S. (2022). Uberização, lutas sociais e pandemia. *REI – Revista Estudos Institucionais*, 8(1), 1–22. <https://doi.org/10.21783/rei.v8i1.602>
- Sandhu, A., & Fussey, P. (2021). The ‘uberization of policing’? How police negotiate and operationalise predictive policing technology. *Policing and Society*, 31(1), 66–81. <https://doi.org/10.1080/10439463.2020.1815244>
- Santos da Silva, J. A., Araújo Santos, D., Moreira Chaves, A., & Teixeira de Assunção, E. (2022). Administração e relações de trabalho na contemporaneidade: Uma tendência denominada uberização. *Cadernos de Ciências Sociais Aplicadas*, 19(33), 26–42.
- Sergeyeva, O., Orekh, E., Bogomiagkova, E., & Kolesnik, N. (2019). Shift to digital gamification in political life (Russian cases). In 4th International Conference on Smart City Applications (SCA'19) (pp. 1–10). [Publisher not specified].
- Shcherbakova, T. S. (2019). Transformation of the service industry in digital economy. *Advances in Economics, Business and Management Research*, 81, 139–143. <https://doi.org/10.2991/mtde-19.2019.28>
- Thornton, M. (2021). Legal professionalism in a context of uberisation. *International Journal of the Legal Profession*, 28(3), 243–263. <https://doi.org/10.1080/09695958.2021.1976633>
- Tuon, L. (2019, August 29). Quase 9 em 10 jovens empregados no último ano estão informais. *Exame*. Retrieved January 1, 2022, from <https://abre.ai/dxfH>
- Vásquez-Garaya, J., Munayco-Apolaya, E., & Ugarte, W. (2021). Carsharing system for urban transport in Lima using Internet of Things. In *Proceedings of the 17th*



International Conference on Web Information Systems and Technologies – WEBIST (pp. 324–331). [Publisher: SciTePress]. <https://doi.org/10.5220/0010718700003058>

- Vieira, D. A. (2021). O autoempreendedorismo informal e a inserção social de jovens pelo trabalho (Master's thesis, Universidade Federal de Sergipe, São Cristóvão, Brazil).
- Vignon, D., Yin, Y., & Ke, J. (2023). Regulating the ride-hailing market in the age of uberization. *Transportation Research Part E: Logistics and Transportation Review*, 169, Article 102969. <https://doi.org/10.1016/j.tre.2022.102969>
- Yehoshua, I., Faran, L. B., Reuveni, M. M., & Sigal, N. (2019). Maccabi RED - Uberization of minor trauma and semi-urgent medical care in primary care settings. *Israel Journal of Health Policy Research*, 8(1), Article 82. <https://doi.org/10.1186/s13584-019-0351-4>
- Zaman, U., Nawaz, S., Javed, A., & Rasul, T. (2020). Having a whale of a time: Linking self-determination theory (SDT), job characteristics model (JCM) and motivation to the joy of gig work. *Cogent Business & Management*, 7(1), Article 1807707. <https://doi.org/10.1080/23311975.2020.1807707>