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Developing A Social Security Micro-Takaful Model for Gig Economy Workforce

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Abstract: The gig economy is a relatively new trend that has not yet been researched or documented significantly. The term "gig economy" refers to labor markets that offer contract-based, temporary, on-demand work and focus primarily on completing specific tasks. This research attempts to conduct a literature review on the risks that gig workers experience and the variables contributing to their lack of protection. In addition, the paper presents an idea for a model of takaful that would apply to gig workers. In addition, the study details the policy implications for the various stakeholders.

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Introduction

According to Tan et al. (2021), the "gig economy" is a relatively new phenomenon that has not been properly researched or recorded. According to Floridi (2018), the phrase "gig economy" is used to refer to labor markets that are short-term, occasional, on-demand, and predominantly task-based. The term "gig" was first used in the music industry. Still, it is now commonly used to refer to labor in many industries, such as transportation, food and beverage, education, and others (Cunningham-Parmeter, 2016). As a result of the global financial crisis in 2008, there was a significant increase in the need for contractual and temporary work, contributing to the growth of the gig economy (Burke, 2019). Jobs only available for a limited time or on-demand are not new. Housekeepers, babysitters, workers at temp agencies, drivers of minicabs, and other "freelancers" have constantly provided their services on an as-needed basis (Floridi, 2017). This trend is especially prevalent in the creative industries. As a result, the phrase "gig workers" has a significant amount of overlap with terms such as "freelancer," "independent workers," "non-traditional workers," "self-employed," and "contingent worker," amongst other names. According to Tubaro et al.'s research from 2020, there have been relatively few changes between traditional kinds of short-term, irregular work and the gig economy and gig work. To begin, the scope and scale of the gig economy are far larger, meaning that it encompasses a greater number of industries and people overall, particularly those with lower levels of competence. Second, the gig economy depends on the mediation provided by digital technology and initial digital platforms. Third, freelance labor typically entails microtasks that are of shorter duration and offer greater flexibility (Tubaro, Le Ludec, & Casilli, 2020).

The utilization of mobile, application-based digital platforms that "actively promote direct matching between providers and customers, on a short-term and on-demand basis" has contributed greatly to the expansion and growth of the gig economy. In contrast to the utilization of digital platforms in the past for outsourcing or purchasing project labor, in which information technology "facilitated the diffusion of competition," the platforms for the gig economy later modified the business model of work (Galperin, 2019).

In 2009, a reporter from the United Kingdom coined the term "gig economy" to refer to employees who pursued "free-floating projects, consultancies, and part-time bits and pieces while transacting in a digital marketplace" (Brown, 2009). Recent improvements in digital technology have impacted the gig economy by making it easier for platform firms to connect with customers and those who need services. According to Wood, Graham, Lehdonvirta, and Hjorth (2019), these platforms bring together businesses looking for temporary workers and large groups of individuals looking for gigs. The expansion of digital platforms may be traced back to 2005 when Amazon Mechanical Turk was first introduced (Wood, 2018). Digital platforms include both the provision of on-demand physical services and online freelancing and microwork. The term "gig economy" refers to a collection of online labor marketplaces such as Mechanical Turk (for microwork), Taskrabbit (for do-it-yourself projects), and Uber (for ridesharing). In these two-sided or multi-sided markets, the platform acts as a middleman, linking supply (workers, such as Uber drivers) with demand (customers, such as Uber passengers) and allowing customers to engage directly with a service provider (Van Doorn, 2017). In other words, the platform connects supply with demand.

According to Cramer and Krueger (2016), most platforms provide on-demand services. According to Zwick (2018), these are location-based applications that give jobs focused on providing service to people who live in a specific geographical area. The platform's objective is to fulfill the offline service requests of its online customers promptly and easily using a pool of readily available workers. Common examples include platforms for delivering meals and rides and a wide variety of other activities, such as cleaning, childcare, and mechanical services. Other examples include platforms for hailing rides. According to Zwick (2018), the variety of professions carried out on these platforms results in a significant variation in the level of difficulty of the jobs and the credentials required of workers.

According to Benjamin, Cooper, Heffetz, and Kimball (2019), in addition to "tangible" functions that take place in the real world, there are platforms dedicated to various types of virtual services offered and fulfilled completely online. Platforms facilitating online freelancing give businesses access to a pool of independent contractors with advanced and specialized skill sets. When regarded in this light, the platform economy is typically understood to be a new outsourcing institution profiting from the information technology revolution. According to Lewchuk (2017), some examples of virtual services that can be obtained through online freelancing include translating, bookkeeping, drawing, and copywriting.

Micro-work platforms, or crowd-work platforms, are the third type of intermediary (Spurk & Straub, 2020). These platforms divide the work associated with virtual services into smaller tasks that are then allocated to and completed by a group of people. According to Sannon and Cosley (2022), crowd work is an innovative approach to organizing digital work and the foundation of an emerging business known as supervised machine learning. Data collecting, data cleansing, and labeling make up the most important part of all the actions carried out on these platforms. In most contexts, human laborers complete jobs that machines cannot accomplish using artificial intelligence. In other cases, though, the results of their labor are fed into learning algorithms, which enables other forms of automation to be implemented. Crowdsourcing has proven to be an endless supply of human knowledge essential to developing artificial intelligence (AI). This demonstrates why, despite their complexity, micro-tasks are often monotonous, without recognition, and require a low level of expertise (Waldkirch, Bucher, Schou, & Grünwald, 2021). Taking selfies, classifying keywords, and encoding scanned receipts are examples of microtasks commonly assigned on crowdworking platforms. In addition, commercial and academic academics are increasingly looking to crowdsourcing as a way to perform surveys and other behavioral activities in an efficient and economical manner (McDonnell, Carbery, Burgess, & Sherman, 2021). According to Sannon, Sun, and Cosley (2022), although many extensive kinds of gig employment are accessible, the modern gig economy may be accurately described using these three primary categories.

Table 1 Classification of the primary forms of gig work.

	On-demand Physical Services	Online Freelancing	Crowd Work
Type of work	Physical services	Virtual Services	Micro-tasks
Location	On-location	Online	Online
Task division	Low	Moderate	High
Task complexity	Variable	High	Low

Source: Developed for Study.

While corresponding to diverse and rich works, these three platforms all have certain qualities in common. The first of these traits is the absence of contractual links between a consumer, a middleman, and a requester (Heiland, 2022). Second, a customer, a middleman, and a requester comprise a tri-party labor framework (Freni-Sterrantino & Salerno, 2021). Third, some tasks or missions only last a brief amount of time. Last but not least, piece-rate pay is available for these three gig work categories (Myhill, Richards, & Sang, 2021).

According to Watson, Kistler, Graham, and Sinclair (2021), most gig workers are considered to be self-employed for tax, commercial, and company law. An emerging source of worry in the gig economy is the phenomenon known as "bogus self-employment," which occurs when workers are exposed to subordination and dependent relationships with the requester and the platform (Townsend, 2021). Because they are self-employed, gig workers have no social security and are responsible for most of the risks associated with running a business (Barrios, Hochberg, & Yi, 2022). In addition, gig workers are typically in a precarious position due to the low piece rates and short-term assignments, making it difficult for self-employed employees to pay for accident, pension, and illness insurance (Hafeez, Gupta, & Sprajcer, 2022). Workers employed through gig economies are not eligible for benefits like the Employees Provident Fund (a retirement scheme that the government of Malaysia regulates), pensions, insurance coverage, or financial security. This is because businesses that hire people to participate in the gig economy typically register those who work for them as vendors. As the traditional labor market continues to grow while the gig economy is expanding, it is not yet clear whether or not the gig economy will eventually replace traditional employment (N. Ahmad, Kefeli, Sidek, & Rahman, 2020).

Gig Economy in Malaysia

It is projected that the gig economy will continue to expand in Malaysia through the year 2022 due to the pandemic caused by the Covid-19 virus (Abdul Rahim, Yaacob, Mohd Noor, Najid, & Zulkifli, 2021). According to the Malaysia Digital Economy Blueprint 2021, the growth of the digital economy accelerated in 2020 as a result of the Covid-19 pandemic. This pandemic was responsible for creating new digital businesses, the compulsion of traditional brick-and-mortar businesses to pivot online, and the potential for millions of Malaysians to go virtual for their eCommerce, entertainment, and even education needs. Due to the severe economic impact of the crisis on the nation, up to twenty percent of M40 households, or about five hundred and eighty thousand households, have moved into the B40 income bracket. Gig workers can effectively utilize digital platforms to create extra money and revenue for their family if they consider the restrictions placed on their mobility. Alongside the high unemployment rate, platforms that are part of the gig economy, such as Grab and Food Panda, are becoming increasingly attractive options for people to make a living. According to Cazá et al.'s research from 2020, a significant number of younger people who work in the gig economy are proficient with modern technology. For instance, they make frequent use of applications designed for smartphones and are engaged on various social media platforms. In Malaysia, the number of people working independently is rapidly approaching four million as of April 2021 and continues to grow daily. According to Keshminder, Mia, Nourani, and Zhang (2022), this trend is expected to expand, especially considering that many gig workers are younger and more proficient with technology.

The government has recognized the gig economy as a potential source of fresh economic growth, and as a result, it will be incorporated in the 12th Malaysia Plan 2021-2025. The gig economy is expected to contribute 18.5% to the nation's gross domestic product (GDP) 2020. The on-demand workers or freelancers who are paid based on specific tasks, clients who require specific services, and companies that link up gig workers with jobs available through digital platforms such as Food Panda, Bungkutlt, Grab Food, TaskRabbit, and e-hail services such as MyCar and Grab are the three major participants in the ecosystem that makes up the gig economy. Several factors, including an increase in market demand and a higher level of technical awareness among customers, are speeding up the expansion of the gig economy. According to Bajwa, Gastaldo, Di Ruggiero, and Knorr (2018), one of the primary reasons why the gig economy is a viable job option today is that workers in this industry can select the type of work they do and the amount of time they spend on it.

An analysis conducted in 2019 by the Employee Provident Fund (EPF) found that around forty percent of Malaysian workers will be employed within the next five years. This percentage is twice the global average (Rahim et al. 2021). Even though the unemployment rate in Malaysia increased to 3.9% in March 2020 as a direct result of the Covid-19 outbreak, the gig economy is projected to continue to develop as industries focusing on digital-based services enjoy growth. This is the case even though the gig economy is anticipated to continue to grow. Recently, the rate of adaptation and acceptance of the gig economy by businesses and individuals at all levels has been extremely strong. This is particularly true in recent years. According to data provided by the Employees' Provident Fund (EPF), the freelancing and contracting sector of the economy in Malaysia expanded by 31% in 2017. This surpasses the capacity of the conventional labor force. In addition, according to a report by the World Bank, around 26% of the workforce in Malaysia is made up of freelancers, and the number of freelancers is growing (Nisya, 2020).

With the launch of the strategic program "Digital Malaysia" in 2012, pursuing digital jobs became a key policy priority. The program was described as "the nation's vision to forge ahead in embracing the global digital revolution, which will propel the nation to high-income status with digital technology as its critical enabler" (Rahim et al., 2021). This was "the nation's vision to forge ahead in embracing the global digital revolution." One of the five pillars that underpin "Digital Malaysia" is a program called "Micro sourcing for the B40s." This program's primary objective is to enable the lowest 40% of income earners to support themselves through microwork and online freelancing. It is hoped that by 2020, 340,000 micro workers will be able to contribute a total of RM 2.23 billion yearly to the economy of Malaysia (Abd Rahman, Rohani, Siratz Taib, & Mohsin, 2021).

When investigating the gig economy among students or recent graduates, on the other hand, the focus will be on the employment situation for recent graduates and the incoming generation as they contend with the current economic challenges (Adnan, Rahmat, Mohtar, & Anuar, 2021). The expansion of human capital through entrepreneurial endeavors has been designated as a priority under the 11th Malaysia Plan to facilitate the transition of economic sectors into knowledge-intensive and innovative activities. As a consequence, educational establishments at the higher level need to be proactive in reforming their delivery system to become more adaptable and to emphasize the student's progress as an entrepreneur. As outlined in Shift 1 of the Malaysian Education Blueprint 2015-2025 (Higher Education) or MDE (HE) (Ministry of Education Malaysia (MoE), 2015), the purpose of this is not only to satisfy local needs but also to develop a higher education system that is capable of producing people with minds that are comprehensive, balanced, and entrepreneurial and who are also capable of acting as job creators. During their time in school, students who participate in IPT entrepreneurship programs and courses that are both structured and thorough can make money and improve their employability (Rahman, Kamaruddin, Zainudin, & Yasin, 2022).

During a session of the Malaysian parliament held on October 12, 2019, Tun Dr. Mahathir Mohamad announced that the gig economy would be incorporated into the 12th Malaysia Plan. This underscores the government's commitment to embracing the growing gig economy in Malaysia as one way to ensure that Malaysians, especially the younger generation, can produce money for themselves. According to Bradley and Pargman (2017), the rapid expansion of the "gig economy," characterized by the use of a workforce dependent on digital technology, has sparked a heated debate about the potential economic and policy repercussions. There is a case to be made that workers' flexibility and productivity have grown due to the rise of the gig economy. One alternative point of view contends that the growing gig economy indicates exploitative labor practices.

As a consequence, Malaysia is transforming its society, as shown by research (Zakaria, 2020), which indicates that Malaysia is shifting from a culture that is dependent on the government to one that values independent employment. The government encourages individuals to develop a sense of self-sufficiency to provide for themselves and their families. According to Cohen and Kietzmann (2014), this suggests that the government has indirectly supported community people to become business owners and entrepreneurs. The culture of paid workers may become less prominent due to the presence of entrepreneurs in the labor market, which is working to expand the range of employment opportunities available to Malaysians.

The digital economy platform is the key emphasis of the government, as indicated in the 2021 Malaysian budget, which establishes it as the priority to drive economic growth in the new economy and the digital era. This goal was established to ensure Malaysia's competitiveness in the global economy (Šestáková & Plichtová, 2019). This illustrates that the government has taken the spread of the gig economy seriously to ensure that it is used by the country's people, particularly the young. This reflects Malaysia's goal to strengthen its digital economy, which is predicted to contribute to its economic growth and indirectly expand its gig economy. By examining the rise in the number of people finding employment in the gig economy, more rules need to be enacted to protect employers' health, safety, and long-term viability. Furthermore, according to Kalleberg and Dunn (2016), it is essential for a business that operates in the gig economy to provide health insurance and retirement plans for their employees and refrain from exploiting their workers and binding them to excessive hours of work. Following the completion of the Fourth Industrial Revolution, the government declared that it would conduct extensive research on the legal definition of the gig economy to forestall a scenario such as the one described above. This is done to protect workers' health and safety in the gig economy and draft legislation to safeguard their rights (Kneese, 2018). This will hopefully make it possible to do away with abusive and exploitative working conditions.

According to a survey by AmBank Research, during the first 10 months of 2019, an estimated 37,260 employees were terminated from their positions. Those laid off found that gig platforms such as Grab and Food Panda were essential to survival. As a direct consequence of the Covid-19 epidemic, more workers were forced to seek jobs on platforms. The Malaysian government provided Malaysia Digital Economy Development (MDEC) RM 25 million to fund establishing the Global Online Workforce (GLOW) program. This action was taken because the government was concerned about affected gig workers. GLOW makes the promise to provide citizens of Malaysia with guidance on how to earn money through the completion of jobs on online platforms. In addition, Malaysia is helping to foster the growth of the gig economy by launching e-rezeki, a digital platform that can encourage people to participate in the gig economy. Based on the individual's skill level in e-rezeki, they will be given digital work to complete. Unemployed people may be able to survive thanks to it. In addition, the government recognizes that people who work for gig economies are technically self-employed and do not have access to any legally sanctioned retirement savings plans (Mahmod & Hassan, 2020). As a result, the government developed the Employees Provident Fund (EPF) to house the i-Saraan platform.

For the purpose of assisting gig workers who have registered with the government, RM 50 million has been allocated to this scheme. Gig workers who engage in the program will be eligible for the same benefits as full-time KSWP members, even though participation in i-saraan is voluntary. In addition, it attempts to encourage gig workers to save money and build up their savings. In addition to the i-Saraan initiative, the government initiated the SOCSO Generator Program. The National Economic Redevelopment Plan (PENJANA) is the vehicle through which this project assists gig workers. The participants in the self-employed and gig economy are the target audience for this initiative, which aims to protect their social security. The Self-Employed Social Security Scheme (SKSPS) would receive a contribution of RM 232.80 from the government under Plan 2, and the term of coverage will be for one year. In addition to other benefits, the SKSPS SOCSO offers medical benefits, benefits for permanent disability, and benefits for handling corpses. It is encouraging that the government of Malaysia has made steps to ensure the health and safety of people who work in the gig economy. Tay and Mohamad (2022) argue that Malaysia needs to build a comprehensive framework to ensure independent contractors' long-term rights.

The International Labor Organization (ILO) investigation concluded that inadequate social protection is a significant issue (N. Ahmad et al., 2020). Workers more reliant on gig employment are also more likely to be unprotected since social protection coverage was found to be inversely proportional to an individual's reliance on gig work. Those individuals whose only source of income is gig work, such as those who do not have any other employment, have inadequate protection, particularly regarding pensions or retirement plans. This is especially true for those individuals who do not have a second job. Sixty-six percent of freelancers in Malaysia did not have a retirement plan, 33 percent did not have a personal financial plan, and 55 percent had less than three months' worth of savings, according to a poll that was conducted in 2017 by the Department of Statistics Malaysia (DOSM) and the Khazanah Research Institute. Gig workers and digital labor are not viewed in the same way as full-time employees by traditional credit models, which means it might be difficult for freelancers to obtain loans or mortgages (Mahmod & Hassan, 2020). This can make it difficult for freelancers to make ends meet. Even if they have a proven track record of generating from the digital platform and a consistent income from it, their options are becoming increasingly constrained. This illustrates that merely having access to a source of financial support is not enough. According to Tay and Mohamad (2022), gig workers require a long-term support system, and social protection must be suited to the changing form of employment.

The B40, the M40, and the T20 are the three different income brackets used to classify Malaysian households. The income is distributed on a household level rather than an individual one. B40 refers to the group of 2.91 million households with a monthly income of less than RM4,850, M40 comprises 2.91 million households with a monthly income between RM4,850 and RM10,959, and T20 comprises 1.46 million households with a monthly income of RM10,960 or more. These findings come from the DOSM's Household Income and Basic Amenities Survey Report 2019, released in 2019. According to the Minister of the Prime Minister's Department (Economy), the classification of income levels is important for the government because it allows them to target their aid to the B40 category, which is especially important when it comes to helping the less fortunate (Business Today, 2022). According to a survey by Versa (Versa, 2021), sixty percent of gig workers reported earning less than one thousand ringgit (RM) per week from their work as gig workers. 30% of gig workers claimed to make between RM1,000 and RM1,999 in gross revenue each week, 7% of gig workers claimed to make between RM2,000 and RM2,999 in gross income each week, and 3% of gig workers claimed to make more than RM3,000 in gross income each week from their work. According to research published by The Malaysian Reserve in 2022 (The Malaysian Reserve, 2022), most people working as gig workers earn less than RM4,000 monthly. As a result, it is possible to conclude that people who operate as gig workers fall under the B40 category. Put another way. These people belong to low-income groups in Malaysia.

Methodology

After performing an in-depth examination of the takaful model for gig workers and carrying out a critical evaluation of academic journal publications published in various international journals, the authors of this paper share their findings. The analysis was carried out in an organized and methodical fashion. According to the study's findings, peer-reviewed journal articles are an excellent source of information because they are up-to-date, consistent, and reliable. As a result, they are recognized as a highly reputable academic source. In addition, academic articles are a cost-effective method of acquiring information and providing a method of data collection that is untainted and unaffected by the researcher's influence or the research process itself (Bowen, 2009). This is one of the many benefits that scholarly articles offer.

The current investigation uses a qualitative systematic review methodology, which (according to Sandelowski (2008)) takes a more scientific approach by adhering to a certain protocol or system during the research process and employing a more rigorous approach. This strategy ensures the most accurate and thorough representation of the scholarly literature on insurance and gig workers possible. When contrasted with several other types of qualitative literature reviews, it is believed that applying a systematic review would be more beneficial in this situation. This is backed by Dixon-Woods' (2010) thesis that a systematic review mitigates concerns (such as those pertaining to impartiality) typically associated with general literature reviews. Dixon-Woods' (2010) argument is based on a systematic review identifying and evaluating all of the relevant literature. This is because tight adherence to a predetermined set of rules was maintained during the process of collecting and analyzing data. This limited the impact of any researcher bias that may have been present.

According to Sandelowski (2008), conducting a systematic review involves collecting and evaluating information. For this investigation, a method known as a systematic review was used to search relevant journals and collect publications pertaining to the topic of takaful for gig workers. For this, a predetermined list of keywords was applied. This list included insurance, takaful, gig workers, freelancers, and the gig economy. We used the journal's search engine whenever it was practical, conducting our queries with the predetermined terms. In cases where this was not an option that could be pursued, every volume and issue was carefully combed through to obtain relevant items. The particular keywords in either the title or the abstract of each article served as the primary criterion for deciding which articles would be included in the compilation. This demonstrated that the respective topics significantly contributed to the article's overarching substance. Only articles published during the selected time period of 2011-2022 were incorporated for temporal representation. This is because the gig economy is a phenomenon that emerged relatively recently.

The selected journals were exhaustively researched to locate appropriate journal articles, and the papers contained within these journals were also exhaustively researched to obtain the required data. During the process, every document was thoroughly reviewed, and pertinent data was extracted and documented as it was discovered. In addition, as the reading went on, introspective annotations were written down. All of the information gleaned from the study was entered into a database constructed with this particular use in mind. The current critical evaluation draws on various viewpoints and disciplinary frameworks to provide a complete survey of the most important issues and arguments discussed in the previous research on takaful and gig workers. After examining the relevant published material, we suggest an appropriate takaful model for gig workers.

Protection of the Gig Workers

Islam encourages protecting assets from dangers by utilizing Shariah-compliant programs, such as takaful (Islamic insurance). In the context of takaful, a group of individuals agrees to contribute to a fund through a " tabarru " donation to provide members with a mutual guarantee against specified losses (Mohd Fauzi & Laldin, 2022). In the event of a loss, the money from the fund is used to compensate the participant. Despite this, low-income organizations with limited budgets view the donation amount in a typical takaful plan as excessive and unaffordable. As a result, most low-income individuals lack access to takaful and cannot afford to protect their assets from perils. In the event of calamities, this income group would incur additional loss, suffering, and destitution without this insurance coverage. The Financial Sector Blueprint 2011-2020 of Bank Negara Malaysia highlighted the significance of financial inclusion and its role in promoting healthy and sustainable economic growth. Bank Negara Malaysia emphasized the significance of financial inclusion and its role in promoting healthy and sustainable economic growth in its Financial Sector Blueprint 2011–2020. One of the recommendations is to ensure that lower-income populations have access to the same resources as higher-income populations. It is proposed that low-income groups are more susceptible to significant losses and must be protected from them.

Micro-takaful (micro-Islamic insurance) is a plan that provides economical protection for a reasonable premium to meet the needs of low-income groups to protect lives and property (Nafti, 2022). To facilitate micro-takaful development in Malaysia, Bank Negara Malaysia developed a regulatory system with industry participation. This resulted in the publication of "Microinsurance and Microtakaful: Discussion Paper" (Bank Negara Malaysia, 2016) to facilitate market expansion and innovation while preserving the quality and sustainability of the country's microinsurance/microtakaful supply. Islamic Financial Services Board (IFSB) and the International Association of Insurance Supervisors (IAIS) (2015) define micro-takaful as "the Islamic version of micro-insurance, offered in both family and individual forms." Following the fundamental concepts of Tabarru' (giving), Taa'wun (cooperative support), and Restriction of Riba (usury), it is a cooperative effort in which a group of members agrees to assist each other with losses resulting from specific risks. Microtakaful is typically made available to low-income and underprivileged individuals (who are usually excluded from the general Takaful terms and conditions) by various bodies governed and monitored by regulatory and supervisory authorities of takaful or insurance or any other qualified supervisory and regulatory responsibility under the national laws of any jurisdiction. Micro-takaful differs from traditional takaful plans regarding their intended participants and operation, such as the severity of the risks covered, affordability, and underwriting factors. Micro-takaful is a subset of takaful and does not differ conceptually (Nafti, 2022).

Bank Negara Malaysia recommended that micro-takaful be established commercially and utilized to defend low-income populations from specific perils. Due to the recent COVID-19 outbreak and the current economic climate, the acquisition of micro-takaful as a protection scheme has become a necessity rather than a choice, especially for the potential population, which consists of low-income groups. The epidemic has had a significant impact on people's careers and personal relationships, as well as the financial health of businesses. Due to the loss of economic resources, many people have fallen into poverty and cannot sustain themselves or meet their obligations. This scenario intensifies in the event of natural disasters, exposing people to greater losses and worsening their living conditions. The purchase of micro-takaful is regarded as one of the most effective methods to provide low-income communities with the protection they require to prevent future natural disaster-related losses and suffering (Ahmed, 2016).

According to the findings of Cake & Arrow (2022), only 89, or nearly 30 percent, of the 292 respondents to their screening questionnaire reported having insurance, particularly for their platform, freelance, or independent job. 26 out of 89 respondents completed the survey. Only 16 26 respondents were covered by insurance for their platform, freelance, or independent work. 18% of gig employees have insurance to protect their platform, contract, freelance, or independent job. Moreover, social insurance is a means by which workers can receive appropriate assistance when exposed to occupational hazards (Du, Lin, Yang, & Xu, 2018). Although social welfare issues and social security resolution are still in their infancy in the gig economy, it is evident that most shared platforms have a significant problem with social security deficiencies. Even well-known platforms in China, such as Mobike and Drip Taxi, face social security concerns (Du et al., 2018). Currently, there is no distinct legal definition of gig workers in Malaysia; however, the term is commonly understood as a freelancer or independent contractor (Radzi, Bidin, Musa, & Hamid, 2022). Legally speaking, the Employment Act 1995 (Act 265), the Labour Ordinance (Chapter 67, Sabah), and the Labour Ordinance (Chapter 76, Sarawak) do not apply to gig workers in Malaysia (Malay Mail, 2022). Section 2(1) of the Employment Act 1995 provides unambiguous definitions of part-time employment (Zakaria, 2020). Many individuals engaged in gig work are comparable to part-time non-contact workers. Part-time employees can establish labor relations with one or more labor unions. This "non-staff" behavior is incomparably worse than that of full-time employees. In addition, many contracts on the network platform involve part-time employees covered by the system for work-related injuries rarely, if ever.

Depending on their circumstances, various aspects of worker protection may affect laborers in the gig economy. Traditional worker protection, on the other hand, is governed by a legal employment contract between the employee and the employer (De Stefano, 2015). Based on traditional employment contracts, the current worker protection mechanisms position emerging types of work, such as gig workers, at risk of social exclusion because they do not provide social security (Aranguiz & Bednarowicz, 2018). The issue of compensation is one of the most discussed aspects of specific social protection. In gig jobs, a guaranteed income is an expense for gig platforms because gig employees determine their hours (Todolí-Signes, 2017). Although platforms must guarantee freelance workers a minimum wage, it may be difficult to apply the concept of a legal minimum wage per hour to employees whose hours are flexible and who work on multiple platforms (Hawley, 2018). Depending on the platform and nature of gig employment, this varies, with some gig workers establishing profitable businesses and others working repetitive, long shifts for less than the minimum wage (Prassl & Risak, 2015). Scholars have also noted that most gig employees who are self-employed in the gig economy may not be eligible for social insurance and social security benefits, such as overtime pay, unemployment, and illness benefits (De Stefano, 2015; Harpur & Blanck, 2020). In addition, platform companies do not contemplate implementing certain systems because social insurance obligations result in higher prices and labor costs. Full-time and part-time freelance workers on online platforms may have varying levels of worker protection coverage, according to Kaine and Josserand (2019). Social protection is scarcer for part-time gig workers and their dependents than full-time gig workers. Since non-standard work contracts, such as freelance work, lack defined reference values for determining work hours, income, and contributions (Belanche, Casaló, Flavián, & Pérez-Rueda, 2021).

Financial Capacity of Gig Workers

According to a previous study conducted in Malaysia, lower-income groups, particularly impoverished individuals, lack adequate protection against financial losses. Examining the lower-income respondents who reside in rural Perak, Malaysia, Rom and Rahman (2012) determined that approximately 97% lack financial protection and cannot contribute to obtaining it. Researchers have proposed that the government facilitate the financial capacity of those individuals to be predominantly protected for death, health, and savings benefits. Micro-takaful can accommodate the requirements of individuals with lower incomes. The Malaysian government subsidizes up to 58.2% of the total funds allocated to public health. Comparatively, the remaining 41.8% is allocated to the private sector, with private finance sources dominating out-of-pocket expenditures (73.8%) and private insurance covering a negligible portion (13.7%) (Salleh, Ghazali, Yazid, Daud, & Razak, 2018).

Numerous studies indicate that over fifty percent of gig workers report a comparatively high annual household income of over sixty thousand dollars (Lepanjuuri, Wishart, & Cornick, 2018; A. Mitchell & Strader, 2018). This is comparable to the median household income in the United States in 2018 of $61,934 (Guzman, 2018). Nonetheless, research suggests that most gig workers fall into the lowest and middle-income brackets (Tran & Sokas, 2017). This disparity between studies may be attributable to varying sample populations and insufficient sampling. For instance, Frederico (2019) demonstrated that women who joined multi-level marketing organizations with low start-up costs earned roughly 20% more than those who joined companies with high expenses. Despite this, one-third of their respondents left their organizations due to unfulfilled income expectations. These findings illustrate the potential disparities between the investigated populations and the financial vulnerability of contract economy workers. Koustas (2019) demonstrates that households entered the contracting economy due to income losses and significant asset depletion. He adds that such a decrease in income could result from preparing for gig work or external disruptions, such as unemployment or pay cuts. This latter argument may have significant implications for the validity of previous studies that focused solely on the activity and debt of the contracting economy. Recent research on the gig economy has largely ignored the implications of financial difficulties outside the gig economy. Nevertheless, they are likely substantial given the current economic climate (J. Mitchell, Li, & Decker, 2021).

Petriglieri, Ashford, and Wrzesniewski (2019) report that financial insecurity is more prevalent among contract workers than permanent employment workers. Over fifty percent of those who rely on contract work as their primary source of income had a higher Anxiety Index score than those with a second full-time job (Edison Research, 2018). In addition, 85% of gig workers whose primary source of income is gig work are concerned about the potential effects of an economic downturn. As a result of their gig work, 78 percent of gig workers in the United States are more concerned with their finances, and 39 percent monitor their accounts more frequently. After entering the gig economy, some researchers discovered that gig employees' spending habits became more frugal (Madonia, 2017). However, according to Eric (2018), gig employees frequently underestimate their expenses.

Individuals typically participate in the gig economy to surmount financial difficulties or obstacles (Koustas, 2019). Gig incomes generally are less than those of conventional full-time jobs. Therefore, gig employees have difficulty managing their finances (Manyika et al., 2016; Prudential, 2017). Eighty percent of gig workers whose primary source of income is gig work have trouble paying a $1,000 unanticipated expense (Edison Research, 2018), while 58 percent of full-time gig workers cannot afford a $400 emergency payment, compared to 30 percent of non-gig workers. Aegon (2016) discovered that 44% of gig workers have no retirement resources, while only 22% occasionally invest for retirement. Furthermore, student obligations motivate low-income millennial gig workers to engage in gig work (Wylie, 2018).

Pay is an additional concern significantly linked to incomes in the gig economy (Du et al., 2018). The most common violations of wages and interests were as follows: there was no justifiable reason for the deduction of salaries; the employer did not pay wages on time; the base wage did not meet the agreed-upon standards; and forced overtime was not compensated with overtime pay (Du et al., 2018). This demonstrates that wage rights and interests significantly impact contract workers, and their current condition is dismal (Maury, 2020).

Loss Exposure

There is a lack of information regarding the effects of gig employment on workers' health. According to Corujo (2017), there has been an increase in the number of fatal and nonfatal accidents that have occurred among conventional contingent laborers. This increase may be explained by differences in training, fear of job loss, and employment in high-hazard industries such as agriculture and construction. Despite this, work is available offline in transportation and services, and numerous dangers are associated with working in the online gig economy. Without an employment relationship, the statutory framework for prevention does not apply to road traffic safety, involvement with the public, use of domestic cleaning chemicals, or intensive keyboard activity at badly placed workstations, even though preventative measures are available.

Given that most gig labor is done in one's vehicle or house, there is a larger likelihood of increased health and safety risks in the gig economy (Friedman, 2014). This is because working in a public workplace removes the protective impact that working in a private workplace would have. When they sustain an injury on the job, the younger an employee is a well-known independent risk factor. According to Christie and Ward's research (2019), chronic job uncertainty, known to lead to bad health in contingent employees, may also be frequent among gig workers. It is anticipated that the choice will play an important part. (Gross, Musgrave, & Janciute, 2018) women forced to take on temporary employment were more likely to experience psychological suffering and physical symptoms than women who voluntarily opted to take on temporary jobs. This was the conclusion of a study that included a large sample of women with temporary occupations.

The majority of people who work for firms like Uber, Lyft, Instacart, and Washio do so as drivers or delivery people, even though some gig workers have higher wages, which could provide some degree of protection and has probably played a role in raising attention to the challenges they face. According to Stewart and Stanford (2017), it is unknown how much more dangerous transportation will be for drivers who are not professionals, other motorists, and pedestrians who must share the road with inexperienced drivers on a timetable. According to Foley, Ruser, Shor, Shuford, and Sygnatur (2014), a separate concern that may arise due to the gig economy is increased social isolation. This is in addition to the regular employment and income insecurity that comes with piecing together several little "gigs" to make a living (Tran & Sokas, 2017). Most gig duties are carried out in isolation from coworkers and usually in competition with one another. This prevents workers from having face-to-face contact with coworkers, which is vital for obtaining social support and discussing work.

In the event of a pandemic, the lack of social protection poses a huge risk to the availability of health care services. Gig workers could continue their service to society without interruptions even while statewide restrictions were in place to combat Covid-19. The amount of social protection afforded to gig workers was the subject of an investigation conducted by (Jaramillo, 2020). 53.9% of participants responded that they were not tied to the health system when asked about their relationship to it. This indicates that they are not a part of the publicly funded health system and do not receive any advantages due to this lack of affiliation. Only 13.6% of those polled reported being members of the contributing health system. Gig workers are also uninsured against the chances of being hurt or killed on the job, having an accident at work, or contracting a condition related to their work. As kids ride bicycles or motorcycles in the middle of the traffic in the city, their activities take place in an atmosphere fraught with danger. In the survey that was cited by (Jaramillo 2020), it was found that 93.4% of respondents did not participate in any type of pension program. In addition, 91.2% of respondents stated that they were not a part of the occupational risk prevention system, and 63.2% indicated that they had been involved in accidents at their place of employment. Similarly, 66.7% of the individuals questioned reported suffering from occupational ailments while employed by Rappi Inc., notably respiratory problems.

In addition, research conducted by Cake & Arrow (2022) found that many gig workers, particularly those who do not have insurance, underestimate the danger they face. More than fifty-five percent of the uninsured gig workers stated that they believed their employment to be "not risky," and fifty-three percent indicated that they were "not worried at all" about what may happen if they were injured while performing their task. In addition, most uninsured workers were not worried about physical accidents or the loss of their belongings; the majority (67%) of uninsured workers listed income loss as their greatest danger. Additionally, concerns regarding libel and several other sorts of legal action were brought forward by this group. The demand for and the supply of gig employment can be quickly conveyed thanks to the sharing of information and opportunities made possible in this internet age via applications.

On the other hand, research conducted by Price Waterhouse Cooper (PwC) suggests that the gig economy could put these people in a position where their skills and career options are limited (Seekings, 2021). Only temporary or part-time employment prevents an individual from acquiring the robust skills and comprehensive knowledge necessary for progressing down a more promising possible career path. In addition, the availability of these short-term employment options will discourage people from saving money for unexpected expenses. Some enterprises in the gig economy, particularly those in the ridesharing and food delivery industries, have caused public anxiety around skills and retirement planning (N. Ahmad et al. 2020). Freelancers who participate in the gig economy may enjoy autonomy and adaptability in their schedules but may not have access to a retirement plan their company sponsors. In addition, other difficulties include having low levels of expertise and few or no possibilities for career advancement. Gig workers with a higher education level may find themselves in a situation where their talents are not a good match for the job. Other factors include uneven workloads and late payments from several different organizations (Uchiyama, Furuoka, & Akhir, 2022).

Awareness towards Gig work

According to the findings of Cake & Arrow (2022), gig workers have misconceptions about the types of insurance they need as independent contractors and the insurance options available to them. 89% of uninsured respondents were unaware that coverage was available to shield them from the risks associated with their gig work. 56% of this group of uninsured gig workers contemplated purchasing insurance but ultimately decided against it for various reasons. 43% of those who contemplated purchasing insurance cited cost as a deciding factor, while 37% reported uncertainty regarding the type of insurance to buy. 52% of the 44% who did not even consider purchasing insurance stated that they did not believe it was necessary, while 48% said that the notion never crossed their minds. This study indicated that employees in the gig economy have cause for confusion. The packaging, creation, and marketing of individual and corporate policies do not reflect the structure of the modern workforce, whose personal and professional lives frequently intersect and overlap. Most respondents possess personal insurance policies, and 22% of those who have never considered purchasing contract work insurance believed their insurance would cover risks associated with their gig work. In contrast, commercial policies rarely made available to contract workers are frequently overly comprehensive and, as a result, prohibitively expensive. These programs do not exist, or at least not in a manner acceptable, feasible, and widely supported by gig workers, for the 89% of gig workers who reported being unaware, possibly because they lack specific insurance plans that would protect their specific risks.

The results of a study conducted by Yoel and Hasym (2021) between July and September 2020 in Kediri, Indonesia, indicate that contract workers' awareness of the need for insurance remains low. Health insurance is not a top necessity for approximately 55% of respondents. 45 percent of respondents lack health insurance. The majority of freelance workers with health insurance are covered by BPJS for Self-Employed (34%), followed by BPJS for Non-Wages Recipient (30%), BPJS Ketenagakerjaan (24%), and Jamkesmas (12%). This indicates that businesses continue to have a limited understanding of the inclusiveness of their freelance workers. According to research findings, most gig employees obtain health insurance on their initiative, as opposed to their employers.

In addition, according to a recent survey conducted by Stride Health, a platform that connects independent employees with the benefits marketplace, 24% of independent and contract workers are uninsured (Hafner, 2022). 58% cited excessive costs as the reason they did not obtain coverage, with 80% estimating that monthly premiums would exceed $100 per family member. As noted in the study, employers can take the initiative to inform their uninsured employees of their eligibility for tax credits. Employer success depends on education, awareness, consistency, and making it simpler for workers to recognize opportunities. This costs businesses nothing but can save employees hundreds or thousands of dollars annually.

In response to the growing trend of the 'formalization' of the labor market, governments worldwide have begun examining potential legal modifications to defend informal employees. In Malaysia, government programs include the Self-Employed Employment Injury Scheme (SEEIS) and i-Saraan. i-Saraan is an optional retirement savings program, whereas SEEIS is an occupational or workplace injuries and illnesses insurance program comparable to SOCSO's coverage for full-time employees. According to the research of Goh and Omar (2020), only a few drivers are aware of SEEIS or are mistaking it for 'e-hailing insurance,' which is essentially automobile accident insurance with passenger coverage. The researchers concur that consistent and explicit communication is essential but assert that scheme design is of greater concern.

Consequently, it is essential to assess the extent of gig economy workers' awareness of financial protection (micro-takaful). The third hypothesis (H3) was devised as follows:

H3: The gig economy workforce is unaware/informed about the insurance/micro-takaful.

Social Security Micro-takaful Model for Gig Economy

Malaysia has implemented a dual banking system where the conventional and shariah financial systems operate concurrently; this includes the Takaful and Insurance institutions. The dual banking system provides Malaysian consumers with a selection of alternative financial products and services, allowing them to acquire the products and services that best meet their requirements (Ishak, 2020; Rapi, Salaudeen, Ravi, Wongsangiam, & Redzuan, 2022). The insurance and takaful industry is one of the primary contributors to Malaysia's financial services sector and promotes economic growth.

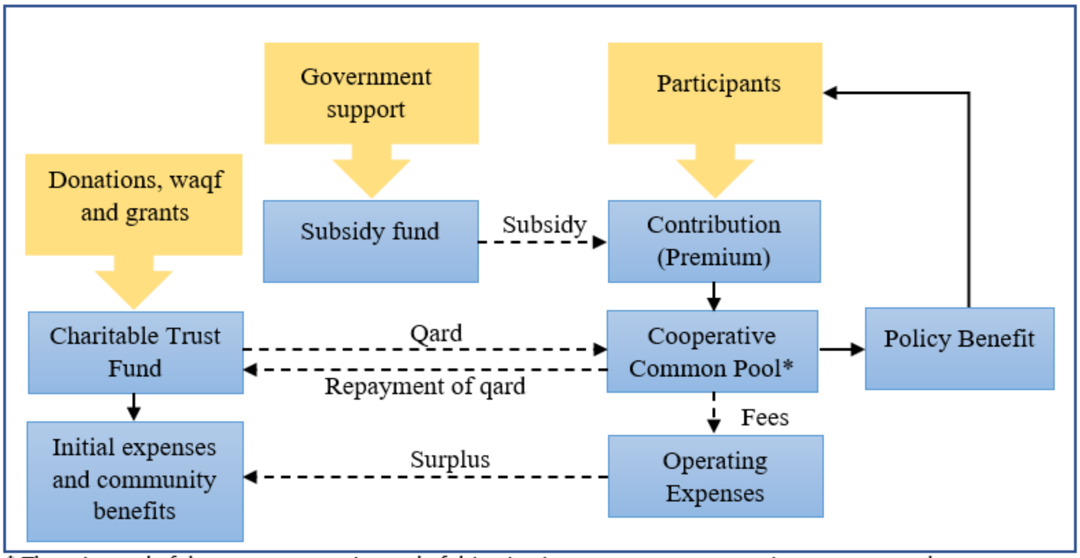
Since its inception in the eighteenth-century conventional insurance and the early 1980s for takaful, Malaysia's Insurance and Takaful sector has undergone rapid expansion and transformation. According to the Bank Negara Malaysia (2004), the Takaful sector has evolved from a minor participant with a limited number of primary products to a viable industry deeply ingrained in the financial system. This accomplishment results from the collaboration between Bank Negara Malaysia and takaful operators in establishing a competitive, resilient, and effective takaful business. According to the Takaful Annual Report (2020), the industry expands annually. The new business total for the family takaful company increased by 46.2% from 2015 to RM461.7 billion.

Moreover, the total amount of new business for general takaful attained a record high of RM3.46 billion in 2020, an increase of 66.5% from 2015. In addition, the industry penetration of takaful increased by 16.9% in 2020 compared to 2019. It is anticipated that this growth will accelerate in the future years.

Nevertheless, despite the rapid growth of Malaysia's insurance and takaful industry, certain obstacles are predominantly related to the products and services available to the middle- and low-income populations. According to M. A. J. Ahmad and Lukman (2017), Ahmed (2016), and Rom and Rahman (2012), the majority of low- and middle-income groups do not qualify for takaful products. According to Rom and Rahman (2012), most poor lack access to essential financial services, such as savings, credit, takaful, and remittances, due to their inability and the high cost of the products and services. In other words, today's takaful products and services are restricted to those with adequate financial resources. BNM and Takaful operators market takaful products and services to all segments of society, particularly people with low incomes with limited financial resources, by delivering products that meet their requirements and are reasonably priced (Mohd Fauzi & Laldin, 2022). Micro-takaful is a collection of activities and initiatives designed to address the need for financial products among low-income people.

Micro-takaful is one of the most beneficial initiatives for the disadvantaged (Rapi et al., 2022). According to Hasim (2014), micro-takaful is one of the best ways for the impoverished to manage risk because it is readily available and inexpensive. In addition to the impoverished, Ahmed (2016) observed that micro-takaful for small and medium-sized enterprises (SMEs) can bridge the microfinance gap regarding the need for collateral and provide SMEs with adequate protection against various risks. Rom and Rahman (2012) added that micro-takaful is one of the less expensive ways to meet the protection requirements of low-income individuals. According to Furthermore (Rapi et al., 2022), micro-takaful is one of the most important strategies for reducing poverty. Micro-takaful instruments protect the poorest and most vulnerable by empowering them to escape poverty and providing them a realistic opportunity to achieve financial independence (Hasim, 2014).

As stated, Malaysia's most recent Micro takaful model is a collaborative, non-profit model in which revenue is not the primary goal. Using (Saleh et al., 2022) as a guide, we propose the following model: government involvement, takaful operators or micro takaful groups, zakat resources (where applicable), donors, and non-governmental organizations. Figure 1 depicts the proposed Micro-Takaful social security paradigm for the gig economy.



* The micro-takaful operator or a micro-takaful institution manages a cooperative common pool.

Figure – The Proposed Social Security Mirco-Takaful Model for the Gig Economy.

Following the current Mudarabah or wakalah paradigm in Takaful agreements, an individual makes a payment to the Takaful operator, who then divides the money between two accounts: the Participant's Savings and Investment Account (PA) and the Participant's Special Account (PSA) as tabarru' (donation) for mutual benefit. These accounts are the Participant's Savings and Investment Account and the Participant's Special Account, respectively. The individual user owns the PA resources, but the PSA funds make up a pool of resources that can be used to assist in mitigating the protected risks. The community-pooled account included in Takaful contracts performs the same functions as the cooperative insurance system, which is depicted in Figure 1 as a fund called the "Cooperative Common Pool." After deducting the operation costs, the monies from the Cooperative Common Pool will be used to pay premiums and re-takaful. The profits made at the end of the year by this Cooperative Shared Pool are contributed to a Charitable Trust Fund. To give subsidy solutions to low-income individuals, including gig workers, there is a necessity for a distinct subsidy fund derived from donations made to the government and profits from zakat. The Board of Trustees will be in charge of managing this fund.

The 'Charitable Trust Fund' is a second fund included in this cutting-edge model of Micro-takaful. The foundational resources for a nominal fund will come from waqf accounts, organizations that administer zakat in other countries, gifts, and grants from non-governmental organizations. The Charitable Trust Fund plans to divide into two parts; the first will pay initial costs and communal benefits, and the second will provide qard Hassan, an interest-free loan. The initial component of the Charitable Trust Fund is to pay for the first financial, research, and marketing expansion of the Micro-takaful scheme. In addition, the Charitable Trust Fund will be responsible for designing a plan to promote Micro-takaful to the target market and identifying prospective distribution networks. This fund will only pay the start-up costs necessary to attain independence from foreign aid because some loans and grants are one-time charitable donations, some are periodic, and some are for two to three years. Other loans and grants are for periods of two to three years. The Charity Trust Fund will store recurring payments and savings through the Community Popular Pool. Anande-kur and Faajir (2019) advised utilizing the surplus for the benefit of society to create social cohesion. One way they suggested doing this was by increasing awareness of the benefits of the Micro-takaful plan.

The remaining portion of the Charitable Trust Fund, which functions similarly to the waqf fund of the waqf model in Takaful contracts, would be managed to ensure its long-term sustainability. This would be done despite the possibility that the Participant Fund would use it to cover temporary deficits caused by fluctuations in the amount of claims paid out (Sha'aban & Salleh, 2021). In this regard, the fund functions much like a well-known cooperative pool. If the fund depletes the Cooperative Common Pool, the Charitable Trust Fund will make a loan as a qard-Hassan to compensate for the deficiency (Htay, Sadzali, & Amin, 2015). Qard-Hassan will be repaid whenever the ponds can generate a profit without incurring any further expenses when the time comes.

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References

Abd Rahman, S., Rohani, J. M., Sirat, R. M., Taib, M. F. M., & Mohsin, R. (2021). A Conceptual Framework on Work-Related Road Safety of the Gig riders in Malaysia. In *Proceedings of the Second Asia Pacific International Conference on Industrial Engineering and Operations Management Surakarta, Indonesia* (pp. 2521-2529). IEOM Society Internationa. Retrieved from http://ieomsociety.org/proceedings/2021indonesia/490.pdf

Abdul Rahim, A. F., Yaacob, N. A., Mohd Noor, R., Najid, N. A., & Zulkifli, N. (2021). Strengthening the gig economy: Future of digital labor workforce platform post-covid-19. *Gading Journal for Social Sciences*, *24*(4), 17-26. Retrieved from https://ir.uitm.edu.my/id/eprint/56810

Adnan, A. H. M., Rahmat, A. M., Mohtar, N. M., & Anuar, N. (2021). Industry 4.0 critical skills and career readiness of ASEAN TVET tertiary students in Malaysia, Indonesia and Brunei. *Journal of Physics: Conference Series*, *1793*(1), 012004. doi: https://doi.org/10.1088/1742-6596/1793/1/012004

Aegon. (2016). *Retirement Preparations in a New Age of Self-Employment*. Aegon. Retrieved from https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/workforce/retirement-self-employed-report.pdf

Ahmad, M. A. J., & Lukman, B. (2017). The effect of IFSA 2013 on late payment of takāful benefits. *ISRA International Journal of Islamic Finance*, *9*(2), 210-215. doi: https://doi.org/10.1108/IJIF-08-2017-0028

Ahmad, N., Kefeli, Z., Sidek, N. Z. M., & Rahman, M. P. (2020). Gig Economy: The Promise of Platform Work. In *The 9th Islamic Banking, Accounting and Finance International Conference 2020 (iBAF2020)* (pp. 321-331). Universiti Sains Islam Malaysia. Retrieved from https://oarep.usim.edu.my/jspui/handle/123456789/14882

Ahmed, M. H. (2016). Micro takaful insurance as a tool to guaranteeing financing and protecting micro enterprises. *Journal of Business & Financial Affairs*, *5*(4), 1-11. doi: https://doi.org/10.4172/2167-0234.1000228

Anande-kur, F., & Faajir, A. (2019). Micro-Finance and Performance of Micro, Small and Medium Enterprises in Makurdi Metropolis. *International Journal of Accounting & Finance (IJAF)*, *9*(2), 1-17. Retrieved from https://www.researchgate.net/profile/Folorunsho-Ajide/publication/335146783

Aranguiz, A., & Bednarowicz, B. (2018). Adapt or perish: Recent developments on social protection in the EU under a gig deal of pressure. *European Labour Law Journal*, *9*(4), 329-345. doi: https://doi.org/10.1177/2031952518817569

Bajwa, U., Gastaldo, D., Di Ruggiero, E., & Knorr, L. (2018). The health of workers in the global gig economy. *Globalization and health*, *14*(1), 124–138. doi: https://doi.org/10.1186/s12992-018-0444-8

Bank Negara Malaysia (2016). Microinsurance and microtakaful discussion paper. Kuala Lumpur: Bank Negara Malaysia. https://www.bnm.gov.my/-/discussion-paper-on-microinsurance-and-microtakaful

Bank Negara Malaysia (2004), Special Takaful Report 2004-20 Years Experience of Malaysian Takaful Industry. Kuala Lumpur: Bank Negara Malaysia. https://www.bnm.gov.my/documents/20124/89746/booklet.en.pdf

Barrios, J. M., Hochberg, Y. V., & Yi, H. (2022). Launching with a parachute: The gig economy and new business formation. *Journal of Financial Economics*, *144*(1), 22-43. doi: https://doi.org/10.1016/j.jfineco.2021.12.011

Belanche, D., Casaló, L. V., Flavián, C., & Pérez-Rueda, A. (2021). The role of customers in the gig economy: how perceptions of working conditions and service quality influence the use and recommendation of food delivery services. *Service Business*, *15*, 45-75. doi: https://doi.org/10.1007/s11628-020-00432-7

Benjamin, D. J., Cooper, K. B., Heffetz, O., & Kimball, M. (2019). A well-being snapshot in a changing world. In *AEA Papers and Proceedings* (Vol. 109, pp. 344-349). American Economic Association. doi: https://doi.org/10.1257/pandp.20191079

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative research journal*, *9*(2), 27-40. doi: https://doi.org/10.3316/QRJ0902027

Bradley, K., & Pargman, D. (2017). The sharing economy as the commons of the 21st century. *Cambridge Journal of Regions, Economy and Society*, *10*(2), 231-247. doi: https://doi.org/10.1093/cjres/rsx001

Brown, T. (2009). The gig economy. *The Daily Beast*, *12*. Retrieved from https://www.thedailybeast.com/the-gig-economy

Burke, A. E. (2019). *The freelance project and gig economies of the 21st century*. London: Centre for Research on Self-Employment (CRSE). Retrieved from https://crse.co.uk/research/freelance-project-and-gig-economies-21st-century

Business Today. (2022). Anwar: What Are The Latest Classifications In Household Incomes In Malaysia? Retrieved from https://www.businesstoday.com.my/2022/10/03/anwar-what-are-the-latest-classifications-in-household-incomes-in-malaysia/

Cake & Arrow. (2022). Insurance in The Age of The Gig Economy. Retrieved from https://go.cakeandarrow.com/insurance-in-the-age-of-the-gig-economy

Christie, N., & Ward, H. (2019). The health and safety risks for people who drive for work in the gig economy. *Journal of Transport & Health*, *13*, 115-127. doi: https://doi.org/10.1016/j.jth.2019.02.007

Cohen, B., & Kietzmann, J. (2014). Ride on! Mobility business models for the sharing economy. *Organization & Environment*, *27*(3), 279-296. doi: https://doi.org/10.1177/1086026614546199

Corujo, B. S. (2017). The 'gig'economy and its impact on social security: The Spanish example. *European Journal of Social Security*, *19*(4), 293-312. doi: https://doi.org/10.1177/1388262717745751

Cramer, J., & Krueger, A. B. (2016). Disruptive change in the taxi business: The case of Uber. *American Economic Review*, *106*(5), 177-182. doi: https://doi.org/10.1257/aer.p20161002

Cunningham-Parmeter, K. (2016). From Amazon to Uber: Defining employment in the modern economy. *Boston University Law Review*, *96*(5), 1673-1728. Retrieved from https://www.proquest.com/openview/200a0ccb2bb5b383b0556ce3b5c34e36

De Stefano, V. (2015). The rise of the just-in-time workforce: On-demand work, crowdwork, and labor protection in the gig-economy. *Comparative Labor Law & Policy Journal*, *37*, 471. Retrieved from https://cllpj.law.illinois.edu/archive/vol_37

Dixon-Woods, M. (2010). Systematic reviews and qualitative methods. In *Qualitative research: theory, method and practice* (pp. 331-346). London: Sage.

Du, Y., Lin, H., Yang, S., & Xu, G. (2018). On The Protection of College Students' Rights and Interests in The "Gig Economy". In *2018 2nd International Conference on Education Innovation and Social Science (ICEISS 2018)* (pp. 408-411). Atlantis Press. doi: https://doi.org/10.2991/iceiss-18.2018.99

Edison Research. (2018). The Gig Economy. Retrieved from https://www.edisonresearch.com/wp-content/uploads/2019/01/Gig-Economy-2018-Marketplace-Edison-Research-Poll-FINAL.pdf

Eric, N. (2018). Gig Economy Workers OfteDon't Realize How Much it Costs Them. Retrieved from https://www.bloomberg.com/news/articles/2018-11-02/gig-economy-workers-often-don-t-realize-how-much-it-costs-them

Floridi, L. (2017). Digital's cleaving power and its consequences. *Philosophy & Technology, 30*(2), 123-129. doi: https://doi.org/10.1007/s13347-017-0259-1

Floridi, L. (2018). Soft ethics, the governance of the digital and the General Data Protection Regulation. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 376*(2133), 20180081. doi: https://doi.org/10.1098/rsta.2018.0081

Foley, M., Ruser, J., Shor, G., Shuford, H., & Sygnatur, E. (2014). Contingent workers: Workers' compensation data analysis strategies and limitations. *American journal of industrial medicine, 57*(7), 764-775. doi: https://doi.org/10.1002/ajim.22302

Frederico, K. (2019). Hustle by the Side Hustle: Women's Explanations for Actual and Anticipated Earnings in Multi-Level Marketing. In *A paper presented at the meeting of the American Sociological Association, New York, NY*.

Freni-Sterrantino, A., & Salerno, V. (2021). A plea for the need to investigate the health effects of Gig-Economy. *Frontiers in public health, 9*, 638767. doi: https://doi.org/10.3389/fpubh.2021.638767

Friedman, G. (2014). Workers without employers: shadow corporations and the rise of the gig economy. *Review of keynesian economics, 2*(2), 171-188. doi: https://doi.org/10.4337/roke.2014.02.03

Galperin, H. (2019). "This Gig Is Not for Wome": Gender Stereotyping in Online Hiring. *SSRN Electronic Journal*, 21–34. doi: https://doi.org/10.2139/ssrn.3501207

Goh, E., & Omar, N. (2020). Ensuring Social Protection Coverage foMalaysia's Gig Workers. Retrieved from https://www.centre.my/post/voluntary-versus-automatic-figuring-out-the-right-approach-on-social-protection-for-informal-workers

Gross, S.-A., Musgrave, G., & Janciute, L. (2018). *Well-being and mental health in the gig economy: Policy perspectives on precarity*. University of Westminster Press. doi: https://doi.org/10.16997/book32

Guzman, G. (2018). *Household Income: 2018. American Community Survey Briefs*. Washington, DC: US Census Bureau. Retrieved from https://www.census.gov/content/dam/Census/library/publications/2019/acs/acsbr18-01.pdf

Hafeez, S., Gupta, C., & Sprajcer, M. (2022). Stress and the gig economy: it's not all shifts and giggles. *Industrial Health, 16*(2), 2021-0217. doi: https://doi.org/10.2486/indhealth.2021-0217

Hafner, L. (2022). 24% of workers in the gig economy are uninsured. How can employers help? Retrieved from https://www.benefitnews.com/news/24-of-workers-in-the-gig-economy-are-uninsured-how-can-employers-help

Harpur, P., & Blanck, P. (2020). Gig workers with disabilities: opportunities, challenges, and regulatory response. *Journal of Occupational Rehabilitation, 30*(4), 511-520. doi: https://doi.org/10.1007/s10926-020-09937-4

Hasim, H. (2014). Developing a conceptual framework of microtakaful as a strategy towards poverty alleviation. *Journal of Economics and Sustainable Development, 5*(28), 1-8. Retrieved from https://repository.essex.ac.uk/13181/

Hawley, A. J. (2018). Regulating labour platforms, the data deficit. *European Journal of Government and Economics, 7*(1), 5-23. doi: https://doi.org/10.17979/ejge.2018.7.1.4330

Heiland, H. (2022). Neither timeless, nor placeless: Control of food delivery gig work via place-based working time regimes. *Human Relations, 75*(9), 1824-1848. doi: https://doi.org/10.1177/00187267211025283

Htay, S. N. N., Sadzali, N. S., & Amin, H. (2015). An analysis of the viability of micro health takaful in Malaysia. *Qualitative Research in Financial Markets, 7*(1), 37-71. doi: https://doi.org/10.1108/QRFM-09-2013-0030

IFSB-IAIS. (2015). Issues in regulation and supervision of microtakaful (Islamic microinsurance). Retrieved from https://www.findevgateway.org/paper/2015/11/issues-regulation-and-supervision-microtakaful-islamic-microinsurance

Ishak, N. S. B. (2020). *Demand for takaful and microtakaful in Malaysia* (Doctoral dissertation, University of Sussex). Retrieved from https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.814082

Jaramillo Jassir, I. D. (2020) Riders: Entre el Desvalor del Trabajo y la Superación del Confinamiento. [Riders: Between the Devaluation of Work and Overcoming Confinement], Bogotá: Friederich Ebert Stiftung. https://repository.urosario.edu.co/items/47f46a63-1973-4919-b0d9-7ac9bea919db

Kaine, S., & Josserand, E. (2019). The organisation and experience of work in the gig economy. *Journal of Industrial Relations, 61*(4), 479-501. doi: https://doi.org/10.1177/0022185619865480

Kalleberg, A. L., & Dunn, M. (2016). Good jobs, bad jobs in the gig economy. *LERA for Libraries, 20*. Retrieved from https://michael-dunn.org/wp-content/uploads/2017/05/ALK-MD.-JQ-in-Gig-Economy.pdf

Keshminder, J., Mia, M. A., Nourani, M., & Zhang, M. (2022). Gig employment in the Malaysian manufacturing industry: a cross-sectional analysis. *Asian-Pacific Economic Literature, 36*(1), 48-66. doi: https://doi.org/10.1111/apel.12348

Kneese, T. (2018). Mourning the commons: Circulating affect in crowdfunded funeral campaigns. *Social Media+ Society, 4*(1). doi: https://doi.org/10.1177/2056305117743350

Koustas, D. K. (2019). What do big data tell us about why people take gig economy jobs? In *AEA Papers and Proceedings* (Vol. 109, pp. 367-371). American Economic Association 2014 Broadway, Suite 305, Nashville, TN 37203. doi: https://doi.org/10.1257/pandp.20191041

Lepanjuuri, K., Wishart, R., & Cornick, P. (2018). *The characteristics of those in the gig economy: final report*. Department for Business, Energy and Industrial Strategy (United Kingdom), NatCen Social Research. Retrieved from https://apo.org.au/node/244361

Lewchuk, W. (2017). Precarious jobs: Where are they, and how do they affect well-being? *The Economic and Labour Relations Review, 28*(3), 402-419. doi: https://doi.org/10.1177/1035304617722943

Madonia, A. (2017). Examining the Future of Workers in the Gig Economy. Retrieved from https://www.womeninretail.com/examining-the-future-of-workers-in-the-gig-economy/

Mahmod, M., & Hassan, H. (2020). Spatial crowdsourcing: Opportunities and challenges in motivating Malaysian women's participation in gig economy. In *2020 IEEE Conference on e-Learning, e-Management and e-Services (IC3e)* (pp. 76-81). IEEE. doi: https://doi.org/10.1109/IC3e50159.2020.9288436

Malay Mail. (2022). HR Ministry mulls scheme to better ensure welfare of p-hailing, e-hailing workers, says Saravanan. Retrieved from https://www.malaymail.com/news/malaysia/2022/08/12/hr-ministry-mulls-scheme-to-better-ensure-welfare-of-p-hailing-e-hailing-workers-says-saravanan/22492

Malaysian Takaful Association (2020). Takaful Annual Report. Kuala Lumpur: Malaysian Takaful Association. Retrieved from https://takaful4all.org/en/annual-reports/

Manyika, J., Lund, S., Bughin, J., Robinson, K., Mischke, J., & Mahajan, D. (2016). *Independent-Work-Choice-necessity-and-the-gig-economy*. McKinsey Global Institute. Retrieved from https://www.voced.edu.au/content/ngv:75265

Maury, O. (2020). Between a promise and a salary: Student-migrant-workers' experiences of precarious labour markets. *Work, Employment and Society, 34*(5), 809-825. doi: https://doi.org//10.1177/0950017019887097

McDonnell, A., Carbery, R., Burgess, J., & Sherman, U. (2021). Technologically mediated human resource management in the gig economy. *The InTernaTIonal Journal of human resource managemenT, 32*(19), 3995-4015. doi: https://doi.org/10.1080/09585192.2021.1986109

Ministry of Education Malaysia (2015). *Malaysia Education Blueprint 2015- 2025 (Higher Education)*. Putrajaya, Malaysia: Ministry of Education. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000232814

Mitchell, A., & Strader, T. J. (2018). Introduction to the special issue on ''Sharing economy and on-demand service business models". *Information Systems and e-Business Management, 16*(2), 243-245. doi: https://doi.org/10.1007/s10257-018-0373-3

Mitchell, J., Li, X., & Decker, P. (2021). Gig workers'financial confidence and behavior. *Global Journal of Accounting and Finance, 5*(2), 88-105. Retrieved from https://www.igbr.org/wp-content/uploads/articles/GJAF_Vol_5_No_2_2021%20pp%2088-105.pdf

Mohd Fauzi, P. N. F. N., & Laldin, M. A. (2022). Micro-takāful scheme for the protection of houses belonging to low-income groups in Malaysia. *ISRA International Journal of Islamic Finance, 14*(3), 303-314. doi: https://doi.org/10.1108/IJIF-05-2021-0090

Myhill, K., Richards, J., & Sang, K. (2021). Job quality, fair work and gig work: the lived experience of gig workers. *The International Journal of Human Resource Management, 32*(19), 4110-4135. doi: https://doi.org/10.1080/09585192.2020.1867612

Nafti, S. (2022). Takaful and Micro Takaful: A Key Factor of Reduction of Poverty and Undernourishment. 4. *Saudi J Econ Fin, 6*(1), 7-10. doi: https://doi.org/10.36348/sjef.2022.v06i01.002

Nisya Aziz, 2020. Gig Economy Malaysia: Empowerment or Exploitation? Retrieved from https://loanstreet.com.my/learning-centre/gig-economy-malaysia-empowerment-or-exploitation

Petriglieri, G., Ashford, S. J., & Wrzesniewski, A. (2019). Agony and ecstasy in the gig economy: Cultivating holding environments for precarious and personalized work identities. *Administrative Science Quarterly, 64*(1), 124-170. doi: https://doi.org/10.1177/0001839218759646

Prassl, J., & Risak, M. (2015). Uber, taskrabbit, and co.: Platforms as employers-rethinking the legal analysis of crowdwork. *Comparative Labor Law and Policy Journal, 37*(3), 619-652. Retrieved from https://ora.ox.ac.uk/objects/uuid:87ff87cd-0738-430b-a17c-e21ee66cb660

Prudential. (2017). Gig Workers in America – Profiles, Mindsets, and Financial Wellness. Retrieved from https://www.prudential.com/corporate-insights/gig-workers-in-america-profiles-mindsets-and-financial-wellness

Radzi, M. S. N. M., Bidin, A., Musa, M. K., & Hamid, N. A. (2022). Protecting Gig Workers' Interests in Malaysia through Registered Association under Societies Act 1966. *Iiumlj, 30*(S1), 157. doi: https://doi.org/10.31436/iiumlj.v30iS1.702

Rahim, A. F. A., Yaacob, N. A., Noor, R. M., Najid, N. A., & Zulkifli, N. (2021). Strengthening the gig economy. *Gading Journal for Social Sciences (e-ISSN 2600-7568), 24*(04), 17-26. Retrieved from https://gadingssuitm.com/index.php/gadingss/article/view/252

Rahman, S. N. A., Kamaruddin, R., Zainudin, S. S. S., & Yasin, M. A. I. (2022). Social media's gig-economy participation amongst contemporary malaysia's muslim entrepreneurs. *Academy of Entrepreneurship Journal, 28*(2), 1-14. Retrieved from https://www.proquest.com/openview/46d44e6a63fa97df4dc3171934290bb7

Rapi, M. Z. H., Salaudeen, A. O., Ravi, M. I. M. R., Wongsangiam, R., & Redzuan, N. H. (2022). Micro takaful programs for the poor: the malaysian experience. *International Journal of Accounting, 7*(45), 65-81. doi: https://doi.org/10.55573/IJAFB.074504

Rom, N. A. M., & Rahman, Z. A. (2012). Financial protection for the poor in Malaysia: Role of zakah and micro-takaful. *Journal of King Abdulaziz University, Islamic Economic, 25*, 1. doi: https://doi.org/10.4197/Islec.25-1.5

Saleh, W. M., Afouna, N. A., Hussein, Y. S., Alshorman, B. A., Humiedan, M. M., & Rizk, M. F. (2022). Proposed Model for Micro-Insurance Risk Management Applied to the cooperative insurance sector in the Kingdom of Saudi Arabia. *Journal of Positive Psychology and Wellbeing, 6*(2), 2029-2042. Retrieved from https://journalppw.com/index.php/jppw/article/view/13376

Salleh, F., Ghazali, P. L. B., Yazid, A. S., Daud, W. N. W., & Razak, R. A. (2018). Developing of Micro Health Takaful of Affordable Monthly Payment for Poor Community in Malaysia. *International Journal of Asian Social Science, 8*(12), 1219-1227. doi: https://doi.org/10.18488/journal.1.2018.812.1219.1227

Sandelowski, M. (2008). Reading, writing and systematic review. *Journal of advanced nursing, 64*(1), 104-110. doi: https://doi.org/10.1111/j.1365-2648.2008.04813.x

Sannon, S., & Cosley, D. (2022). Toward a More Inclusive Gig Economy: Risks and Opportunities for Workers with Disabilities. *Proceedings of the ACM on Human-Computer Interaction, 6*(CSCW2), 1-31. doi: https://doi.org/10.1145/3555755

Sannon, S., Sun, B., & Cosley, D. (2022). Privacy, surveillance, and power in the gig economy. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (pp. 1-15). Association for Computing Machinery. doi: https://doi.org/10.1145/3491102.3502083

Seekings, C. (2021). Gig economy to supply fifth of financial services workers by 2026. Retrieved from https://www.theactuary.com/2021/02/24/gig-economy-supply-fifth-financial-services-workers-2026

Šestáková, A., & Plichtová, J. (2019). Contemporary commons: Sharing and managing common-pool resources in the 21st century. *Human Affairs, 29*(1), 74-86. doi: https://doi.org/10.1515/humaff-2019-0007

Sha'aban, M. M., & Salleh, F. (2021). Does Nigerian low-income families need for micro family takaful scheme. *Journal of Contemporary Issues in Business and Government, 27*(2), 52-58. doi: https://doi.org/10.47750/cibg.2021.27.02.007

Spurk, D., & Straub, C. (2020). Flexible employment relationships and careers in times of the COVID-19 pandemic. *Journal of Vocational Behavior, 119*, 103435. doi: https://doi.org/10.1016/j.jvb.2020.103435

Stewart, A., & Stanford, J. (2017). Regulating work in the gig economy: What are the options? *The Economic and Labour Relations Review, 28*(3), 420-437. doi: https://doi.org/10.1177/1035304617722461

Tan, Z. M., Aggarwal, N., Cowls, J., Morley, J., Taddeo, M., & Floridi, L. (2021). The ethical debate about the gig economy: A review and critical analysis. *Technology in Society, 65*(2), 101594. doi: https://doi.org/10.1016/j.techsoc.2021.101594

Tay, K. W., & Mohamad, S. F. (2022). Advantages and challenges of the gig economy: Perspective from potential hospitality employees/Tay Kei Win, Siti Fatimah Mohamad. *Journal of Tourism, Hospitality and Culinary Arts, 14*(1), 348-363. Retrieved from https://ir.uitm.edu.my/id/eprint/68260/

The Malaysian Reserve. (2022). The gig economy: What monster are we breeding? Retrieved from https://themalaysianreserve.com/2022/10/18/the-gig-economy-what-monster-are-we-breeding/

Todolí-Signes, A. (2017). The 'gig economy': employee, self-employed or the need for a special employment regulation? *Transfer: European Review of Labour and Research, 23*(2), 193-205. doi: https://doi.org/10.1177/1024258917701381

Townsend, K. (2021). *Challenges in Today's Unemployment Insurance System*. Federal Reserve Bank of Atlanta. doi: https://doi.org/10.29338/wc2021-02

Tran, M., & Sokas, R. K. (2017). The gig economy and contingent work: An occupational health assessment. *Journal of occupational and environmental medicine, 59*(4), e63. doi: https://doi.org/10.1097/JOM.0000000000000977

Tubaro, P., Le Ludec, C., & Casilli, A. A. (2020). Counting 'micro-workers': societal and methodological challenges around new forms of labour. *Work Organisation, Labour & Globalisation, 14*(1), 67-82. doi: https://dx.doi.org/10.13169/workorgalaboglob.14.1.0067

Uchiyama, Y., Furuoka, F., & Akhir, M. N. M. (2022). Gig Workers, Social Protection and Labour Market Inequality: Lessons from Malaysia. *Jurnal Ekonomi Malaysia, 56*(3), 165-184. doi: http://dx.doi.org/10.17576/JEM-2022-5603-09

Van Doorn, N. (2017). Platform labor: On the gendered and racialized exploitation of low-income service work in the 'on-demand'economy. *Information, communication & society, 20*(6), 898-914. doi: https://doi.org/10.1080/1369118X.2017.1294194

Versa. (2021). Gig Economy In Malaysia & How Versa Can Help. Retrieved from https://versa.com.my/gig-economy-in-malaysia-how-versa-can-help/

Waldkirch, M., Bucher, E., Schou, P. K., & Grünwald, E. (2021). Controlled by the algorithm, coached by the crowd–how HRM activities take shape on digital work platforms in the gig economy. *The International Journal of Human Resource Management, 32*(12), 2643-2682. doi: https://doi.org/10.1080/09585192.2021.1914129

Watson, G. P., Kistler, L. D., Graham, B. A., & Sinclair, R. R. (2021). Looking at the gig picture: Defining gig work and explaining profile differences in gig workers' job demands and resources. *Group & Organization Management, 46*(2), 327-361. doi: https://doi.org/10.1177/1059601121996548

Wood, A. J. (2018). Powerful times: Flexible discipline and schedule gifts at work. *Work, Employment and Society, 32*(6), 1061-1077. doi: https://doi.org/10.1177/0950017017719839

Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Good gig, bad gig: autonomy and algorithmic control in the global gig economy. *Work, employment and society, 33*(1), 56-75. doi: https://doi.org/10.1177/0950017018785616

Wylie, M. (2018). Debt-ridden millennials drive gig economy. Retrieved from https://www.bizjournals.com/bizwomen/news/latest-news/2018/02/debt-ridden-millennials-drive-gig-economy.html

Yoel, S. M., & Hasym, M. W. (2021). Healthcare Protection for Gig Workers: A Brief Case During Pandemic. In *1st International Conference on Law and Human Rights 2020 (ICLHR 2020)* (pp. 404-409). Atlantis Press. doi: https://doi.org/10.2991/assehr.k.210506.053

Zakaria, I. (2020). Making"gigwork" work in Malaysia. Retrieved from https://www.malaymail.com/news/what-you-think/2020/11/16/making-gig-work-work-in-malaysia-izwan-zakaria/1922956

Zwick, A. (2018). Welcome to the Gig Economy: neoliberal industrial relations and the case of Uber. *GeoJournal, 83*(4), 679-691. doi: https://doi.org/10.1007/s10708-017-9793-8