

# FACTORS AFFECTING FOOD DELIVERY RIDERS' INTENTION TO PARTICIPATE IN THE GIG ECONOMY

# 

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Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia, in fulfilment of the requirements for the degree of Master of Science

November 2022

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# **DEDICATION**

This thesis honours both of my parents. My late father, Haji Shafiei, not only raised and nurtured me, but he also paid a high price for my education and intellectual development over the years. In times of despair and discouragement, my mother, Hajah Norani, has been a source of inspiration and strength. Her motherly care and support were demonstrated on several occasions while I was working on this thesis.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

# FACTORS AFFECTING FOOD DELIVERY RIDERS' INTENTION TO PARTICIPATE IN THE GIG ECONOMY

By

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#### November 2022

Chairman : Rosmah Binti Mohamed, PhD School : Business and Economics

This study looked at numerous factors affecting food delivery riders' (FDRs) intention to participate in the gig economy in the wake of the Covid-19 (C19) epidemic. FDRs typically transport prepared food from restaurants to customers. Despite the increased academic interest in a labour market characterized by the prevalence of short-term contracts or better known as the gig economy, the emergence of new types of gig employment, and the factors that inspire workers to participate in the gig economy, few studies have looked at the impact of C19 and its connections to FDRs' participation in the gig economy. In the absence of employment protection, the Push-Pull-Mooring (PPM) theory, with numerous antecedents affecting FDRs, had been used to comprehend factors affecting their participative behaviour. Data was collected from 403 FDRs, 393 of which were valid. SPSS 26.0 and SmartPls version 3.30 software were used to evaluate the data in this study.

This study found push variables (economic necessities and extra income) and pull variables (flexibility, control and autonomy) to positively correlate with the FDRs' intention to participate in the gig economy. In comparison, limited alternatives (push variable) and enjoyment (pull variable) were found to have a negative relationship with such intention. This study has also indicated that FDRs will have lower participation due to the lack of employment protection (mooring factor), which moderated the relationship between economic necessities and their participation in the gig economy. The empirical results reported herein should be considered in light of some limitations as it focused on FDRs engaged within the Klang Valley Area and utilized a cross-sectional quantitative method on a section of a targeted population, not the whole population. In conclusion, this study provides some practical suggestions for FDRs that assist critical stakeholders in obtaining good work and living conditions during the C19 pandemic.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Master Sains

# FAKTOR-FAKTOR YANG MEMPENGARUHI HASRAT PENGHANTAR-PENGHANTAR MAKANAN UNTUK MENYERTAI EKONOMI GIG

Oleh

#### AZARISHAM BIN HAJI SHAFIEI

November 2022

Pengerusi : Rosmah Binti Mohamed, PhD Sekolah : Perniagaan dan Ekonomi

Kajian ini merungkai pelbagai faktor yang mempengaruhi hasrat penghantar-penghantar makanan untuk mengambil bahagian di dalam ekonomi gig berikutan wabak Covid-19 (C19). Penghantar-penghantar makanan biasanya mengangkut makanan yang disediakan dari restoran kepada pelanggan. Walaupun minat akademik meningkat dalam pasaran buruh yang dicirikan oleh kelaziman kontrak jangka pendek atau lebih dikenali sebagai ekonomi gig, kemunculan jenis pekerjaan baru gig, dan faktor-faktor yang memberi inspirasi kepada pekerja untuk mengambil bahagian dalam ekonomi gig, kajian yang melihat kesan C19 dan kaitannya dengan penyertaan penghantar-penghantar makanan dalam ekonomi gig adalah terhad. Dengan ketiadaan perlindungan pekerjaan, teori *Push-Pull-Mooring (PPM)*, dengan beberapa anteseden yang mempengaruhi hasrat penghantar-penghantar makanan ke dalam ekonomi gig, telah digunakan untuk memahami faktor yang mempengaruhi tingkah laku penyertaan mereka. Data dikumpul daripada 403 responden, 393 daripadanya adalah lengkap. Perisian SPSS 26.0 dan SmartPls versi 3.30 digunakan untuk menganalisa data di dalam kajian ini.

Kajian ini mendapati faktor *push* (keperluan ekonomi dan pendapatan tambahan) dan faktor *pull* (fleksibiliti, kawalan dan autonomi) berkorelasi positif dengan hasrat penghantar-penghantar makanan untuk menyertai ekonomi gig. Sebagai perbandingan, alternatif terhad (faktor *push*) dan keseronokan (faktor *pull*) didapati mempunyai hubungan negatif dengan niat tersebut. Kajian ini juga telah menunjukkan bahawa penghantar-penghantar makanan akan mempunyai penyertaan yang lebih rendah kerana kekurangan perlindungan pekerjaan (faktor *mooring*), yang didapati turut menyederhanakan hubungan antara keperluan ekonomi dan penyertaan mereka di dalam ekonomi gig. Keputusan empirikal yang dilaporkan di sini harus dipertimbangkan berdasarkan kepada beberapa batasan kerana kajian ini memberi tumpuan hanya kepada penghantar-penghantar makanan yang berada di dalam Kawasan Lembah Klang dan kaedah kuantitatif *cross sectional* tidak mencakupi keseluruhan populasi penghantar-penghantar makanan di Malaysia. Kesimpulannya, kajian ini menyediakan beberapa

cadangan praktikal yang diharap dapat membantu pihak-pihak berkepentingan untuk menjamin pekerjaan penghantar-penghantar makanan agar lebih baik semasa pandemik C19.



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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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# **Declaration by graduate student**

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# LIST OF ABBREVIATIONS

FDR Food Delivery Rider

FDP Food Delivery Platform

OFDS Online Food Delivery Services

PP Push-Pull

PPM Push-Pull-Mooring

SPSS Statistical Package for the Social Sciences

SEM Structural Equation Modelling

SmartPLS Smart Partial Least Squares Software

AVE Average Variance Extracted

VIF Variance Inflation Factor

#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1 Introduction

Due to the COVID-19 (C19) pandemic, everyone is at risk of fatigue. The frontline food delivery riders (FDRs) who gather food or meals from numerous restaurants and fast-food places and carry it home are also affected. Because of the outbreak, the number of FDRs has recently surged. During the pandemic, people have grown more dependent on online meal ordering. Workplace conflicts and labour disputes among FDRs have increased as the pandemic's significance has grown (Buncaras et al., 2022). An increasing number of FDRs have expressed concerns over food delivery platforms' (FDP) lack of transparency, abusive remuneration system, and poor safety precautions. These are some of the difficulties that FDRs face daily due to being regarded as independent contractors (Katrodia, 2020).

FDRs are responsible for making deliveries go out in all kinds of weather, contending with traffic, exhaustion, and various other logistical obstacles, to fulfil orders on time. This career, like any other, has its difficulties, including the highs of assisting others in their time of greatest need, and the lows of being the recipient of others' assistance (Xue et al., 2021). Their employment requires much physical labour, which is a contributing factor to their job stress. Due to the widespread unemployment, as more inexperienced workers take jobs as FDRs, this may cause the risks associated with this kind of work to become more prevalent (See-Kwong et al., 2017). This research investigates factors that affect FDRs' intention to participate in the gig economy. The results will provide a better understanding of themselves and the factors that affect their mental health in their occupations. It will also assist future researchers in expanding their understanding of FDRs in Malaysia.

# 1.2 Background of the Study

Food delivery services have grown in popularity among urban dwellers and countless other large cities worldwide in only a few short years (Ivanova et al., 2018). There has been a rise in the number of persons using delivery services as a secondary source of income. Customers often believe that ordering meals for delivery, as opposed to eating in a restaurant, is safer since it lowers their contact with other individuals and, thus, their risk of contracting Covid-19 (C19) infection (Ortiz-Prado et al., 2021). Providers who bring food to customers are divided into two categories: those that deliver directly from restaurants to customers and those that deliver directly from platforms to customers. Fast food restaurant providers like Kentucky Fried Chicken and McDonald's are examples of restaurants that provide delivery services. These companies prepare food and then deliver it to the customer. Customers can order directly via the website of restaurant or through the website of a third-party platform. The names of these third-party services might change depending on the nation; Swiggy in India is an example. The phrase "platform

delivery" refers to the process by which third-party platforms deliver online orders submitted by customers directly to partner restaurants.

These businesses may or may not provide delivery services (Li et al., 2020). The delivery of food via the internet involves the employment of exceptionally efficient and scalable real-time delivery systems. Restaurants can use already existing staff members, such as waiters in certain smaller restaurants, for self-delivery. Most renowned restaurants, such as McDonald's, may also consider using specialised delivery crews who have been expressly recruited and educated for this position. In addition, restaurants may employ various types of logistics, such as crowdsourcing and a network of independent contractor delivery riders. This food delivery strategy is successful and economical (Sun, 2019). Lockdowns during the epidemic's beginning, in addition to physical distance limits, have given the sector a huge boost, and delivery has become a lifeline for the food service business. It is expected to be prominent in the gastronomical landscape in the coming years (Castillo & Zhangallymbay, 2020). The closure of businesses due to C19 has had several knock-on effects, including the expansion of existing online delivery services and the paradigm change that has led to an increased number of restaurants focusing on delivery. During this time, delivery services emerged as a feasible option for lowering sales decreases. As a result, even though just forty-six per cent of restaurants and cafes offered delivery services before the lockdown, ninety-two per cent of companies projected that they would continue to do so throughout the confinement. The individuals who work in the delivery industry are now on the front lines of the C19 outbreak. Most of them do so through an application, which allows them to connect with their clients and provide their services to those consumers (See-Kwong et al., 2017).

In Malaysia, purchasing meals online has replaced traditional dining out, and this trend is broader than just takeout and restaurants. Many companies distribute meals and provide delivery services through the internet. One of these businesses is FoodPanda, and it made history in Malaysia by becoming the first delivery service to debut with significant momentum there. Man Delivery, Honestbee, Dahmakan, Running FoodTime, Shogun2U, and Mammam are some of the other companies in this industry that compete with DeliverEat and Uber Eats. Other rivals in this market include Uber Eats. Most meal delivery services may be clustered in significant urban areas such as Kuala Lumpur, the Klang Valley, Johor Bahru, and Penang (Chai & Yat, 2019). The online food delivery service (OFDS) is making headway in Malaysia and is continuing to gather support. When citizens use online food ordering applications, they demonstrate a high level of engagement. Before the pandemic, an emerging pattern in the urban areas of Malaysia was the usage of online meal delivery services such as GrabFood, FoodPanda, and LalaFood, amongst others. This trend continued even after the epidemic was declared over. These and other technology firms contributed to the growth of this trend. Although millennials well received the programme, it needed help appealing to all of the other elder generations in the nation. However, since the Movement Control Order (MCO) was implemented, the market has seen explosive growth. Because of these diverse efforts to sell food products online, a considerable number of new job openings may be created as a direct result of these efforts. In addition, it facilitates the development of contacts between local company owners and others who may assist them in growing their companies (Nayan & Hassan, 2020).

A growing number of people are discovering that working as a courier may effectively bring in consistent income. Customers have the impression that ordering meals for delivery are a safer alternative than dining out since it lowers their risk of catching the C19 virus and their likelihood of coming into contact with other individuals (Ortiz-Prado et al., 2021). During the global C19 pandemic in 2020, the advantages of OFDS were quickly evident because it offered consumers ready-to-eat meals while enabling food producers to continue running their companies (Li et al., 2020). Because of this climate, delivery services have become more popular as a possible source of income for both official and informal businesses, as well as individuals engaging in the gig economy (Chang & Meyerhoefer, 2021). FDPs typically bear the responsibility of recruiting and instructing professional delivery workers. Alternatively, FDPs may resort to crowdsourcing logistics, which entails using delivery labour not engaged by them. Either way, FDPs can recruit and train professional delivery people. Professional delivery people often get training, have at least part of their salary guaranteed, and some remuneration is commission-based. On the other hand, independent delivery personnel, frequently referred to as "riders," are paid on a commission basis instead of an hourly rate (Zhao et al., 2021).

FDPs, also known as a gig economy, have seen a fantastic development, which has created new work prospects built on creative labour practises and redefined what it means to be employed (Ahsan, 2020). A widespread misunderstanding regarding the FDPs involves direct activity sharing between FDPs as service providers and FDRs as workers and customers. According to Dredge and Gyimóthy (2015), the growth of FDPs disregards the function of commercial mediators, who are responsible for creating unregulated workplaces and providing possibilities for unpaid employment. FDRs are obliged to operate as a form of hospitality service within the context of the gig economy. They represent restaurants, customers, and FDPs in interactions with those respective parties. The degree to which front-of-house staff members are ideally equipped for their tasks inside front-of-house delivery platforms and the degree to which restaurants want to use these FDPs are intimately associated with one another. On the other hand, as seen by a slew of recent cases involving labour unrest, many FDRs appear to doubt the value of their employment in an industry that may be unregulated and unequal (Todolí-Signes, 2018). In the Philippines, some of the delivery service's drivers were given ten-year suspensions after organising and participating in a protest over their drastically lower pay (Gregorio, 2021). Workers of an online food delivery service called Deliveroo went on strike in Sheung Wan, Hong Kong Island, protesting new business restrictions that might affect their pay (Westbrook, 2021).

The health of delivery workers is in peril because they are becoming more mobile, with the bulk of them riding motorbikes or motorcycles, and because they have a large number of encounters with other people during the C19 pandemic. Workers in the delivery business are vulnerable to exploitation because they cannot depend on a predictable income and are sometimes prevented from participating in labour and social protection programmes accessible to regular workers (Apouey et al., 2020). The epidemic is becoming more prevalent, which has resulted in a surge of problems in the workplace as well as labour disputes among FDRs. As a response, a significant number of people have come out to express their dissatisfaction with the lack of openness, compensation, and precautionary measures taken. These people have coordinated their efforts to speak with a single voice. These are only some of the many challenges FDRs experienced that

affected their mental health. Because delivery drivers often continue working while being ill or wounded, their poor health may significantly influence driving safety, and stress and worry may have a substantial detrimental impact on how they drive (Buncaras et al., 2022). Another issue associated with FDRs is working hours, which may induce stress or burnout, one of the many challenges that FDRs have to deal with, and it is one of the potential causes of stress on the job. FDRs are not immune to the continuing consequences of the C19 outbreak because of their position as front liners in the fight (Katrodia, 2020). FDRs gather food and lunches from various fast food and restaurant outlets for transport back home. People's reliance on food delivered to their homes over the internet has increased since the outbreak began. Workers who deliver meals have more lofty professional aspirations than just maintaining their present work (Lin et al., 2020). Because of this, companies typically engage more committed delivery riders who are accessible at all times. The ramifications of using online meal delivery services may be broken down into three categories: the economic, the social, and the environmental, and each of these aspects has the potential to have an impact on the services' long-term viability. It has resulted in a significant increase in job opportunities, particularly for those in charge of food delivery. However, they must put up with the repetitive and monotonous nature of their labour, which includes lifting hefty objects, receiving minimal training, and running the risk of injury (Awi et al., 2021).

#### 1.3 Problem Statement

Millions of Malaysian employees have been unable to go to work because of the impacts of the C19 pandemic and the containment measures that have been implemented. This situation has led to an extraordinarily severe decline in activity and job losses on a scale never seen before (Nazruzila Razniza & Kamal Halili, 2020). Since March, the implementation of the Movement Control Order (MCO) 2020 and many other forms of MCO have become a knockout punch in terms of their economic impact (Azhar & Shakil, 2021). Inequalities, poverty, and suffering, especially among the most vulnerable, are being exacerbated as the economy continues its downward spiral, with growing damaging consequences on employment, wages, lives, supply chains, and enterprises (Nga et al., 2021). There has been a growth in the number of self-employed workers who need access to social security due to the proliferation of hundreds of thousands of new business models in the gig economy, many of which involve non-standard employment arrangements (Nungsari & Chuah, 2021).

The gig economy is picking pace, but the workers in this category must catch up regarding laws and legislation to protect them. It is necessary to protect their means of subsistence while working. This situation calls for proactive rather than reactive operations that compel businesses to comply with the regulations (Jamaluddin et al., 2021). For people who participate in the "gig economy," these reactions might have farreaching consequences. It is only sometimes simple to assess the essence of a firm based on looks alone, especially when job outcomes are unfavourable. How a business makes choices may be impacted by various factors, including long-term policies, existing legislation, internal capability, and the present state of the market (Rahim et al., 2021). Most of Malaysia's gig economy workers are independent contractors, such as e-hailing drivers and delivery riders, who are not covered by the country's fundamental labour legislation. According to the Employment Act 1955, the Labour Ordinance (Sabah 67),

and the Labour Ordinance (Sarawak 68), they have not been deemed employees. They do not even make the minimum wage, unlike others with regular occupations (Jais & Marzuki, 2020). The current employment regulations are structured in the traditional contract between an employer and an employee. Workers who engage in the gig economy are more comparable to independent contractors than traditional employees. A gig platform does impact the work people undertake to earn a livelihood (Ahmad, 2020). Finding a job in Malaysia has been a challenging endeavour for many years. The national unemployment rate of 3.3 per cent is high compared to that of many of our contemporaries in Asia. The most critical problem that has to be addressed right now is the availability of employment in Malaysia and how work is organised there.

On the other hand, people might be forced into self-employment out of the need in situations that are not so benign. This type of entrepreneurship is sometimes called necessity entrepreneurship (Karlsson & Wranne, 2019). Research has also been conducted that focuses more on the actual intrinsic motivating variables present in entrepreneurs. These aspects include individual qualities that explain why some persons continue in entrepreneurship while others do not. Past research has also been done concentrating more on entrepreneurs' fundamental intrinsic motivating aspects in addition to these studied topics (Ravenelle, 2019). Various research was conducted on motivation at various phases of the process of becoming self-employed, specifically in areas that aim to induce the motivation to become self-employed. However, some elements inspire employees to continue to be self-employed, and very few variables motivate workers to stop being self-employed.

This study investigates what factors motivate them to continue participating in the gig economy by analysing certain factors that lead to their intention to stay. In light of Lewchuk (2017) observation that the gig economy now seems to infringe on what defines workers' rights and avoid regulation, this research seeks to understand what reasons encourage those who already work in the gig economy to stay in it. For the most part, existing research has concentrated on the elements that initially entice individuals to participate in activities related to the gig economy. However, these studies often ignore the factors that encourage or discourage employee engagement. The study done to evaluate employees' engagement in the gig economy during the C19 pandemic is relatively limited. Even if it does exist, it does not indicate that workers' participation was related to the epidemic's effect. Most studies concentrate on a specific target group, such as an industry, skill set, technology platform, global flows, place of work, or country. Although much effort has been put into understanding the characteristics that motivate gig workers, participation in the gig economy still needs to improve. Healy et al. (2017) found that there currently needs to be a hole in the academic literature around the gig economy, even though there is an apparent problem of public concern for employees inside the gig economy. The findings of previous research focus almost entirely on motivating elements, but they do not link this information with inhibiting aspects; as a result, the findings of these studies are all over the place.

Due to the current dearth of literature on the topic, the gig economy needs to be better conceptualised, and its workings still need to be understood (Donovan et al., 2016). Much study has been done to figure out how to recognise or take advantage of opportunities, as well as how or why entrepreneurs establish intents for creating

possibilities and concepts like these, commonly referred to as opportunity entrepreneurship. (Woodcock & Graham, 2019). Within the PPM theory, few antecedents of push factors and gig workers' participation have been studied. Push factors such as stresses (Wang et al., 2019), financial need, contextual factors, job deprivation (Angelucci, 2020), lack of income or employment opportunities (Keith et al., 2019), lack of choices (Paul, 2019), and to secure regular employment (Jeon et al., 2019). The relationship between push factors and gig workers' participation is not fully comprehended (Angelucci, 2020), (Sevilla, 2020), (Keith et al., 2020), (Karlsson & Wranne, 2019), and (Paul, 2019). Lack of research examining the pull factors and workers' participation (Sevilla, 2019), (Paul, 2019), (Keith et al., 2019); and (Angelucci, 2020). Inconsistent relationship between pull factors and workers' participation (Sevilla, 2019), (Paul, 2019), (Keith et al., 2019), (Angelucci, 2020); and (Campion et al., 2019). No specific factor was found to have encouraged nor discouraged gig workers' participation (Seargeant, 2017), (Rachmawati et al., 2022). A variety of antecedents have been tested, such as precarious work (Bajwa et al., 2018), workers' compensation (Tran & Sokas, 2017), and traditional regulations (Stewart & Stanford, 2017). Mooring factors and gig workers' participation is not fully grasped (Flanagan, 2019), (Milland, 2017), and (Friedman, 2014). Only five studies utilized a push-pull theoretical framework for examination (Angelucci, 2020), (Sevilla, 2020), (Keith et al., 2020), (Karlsson & Wranne, 2019); and (Paul, 2019). The PPM theoretical framework is not widely explored.

The Malaysian High Court concluded on July 9, 2021, that the driver for the e-hailing service Grab, also known as the Claimant, did not meet the requirements to be considered an employee under the terms of the Industrial Relations Act 1967 ("IRA"). Because of this decision, the Claimant could not file a wrongful dismissal claim against Grab. Because the Claimant's circumstances did not meet the threshold requirements, the Minister of Human Resources did the right thing when she decided not to forward the matter to the Industrial Court for consideration. This decision was made because the Claimant's situation did not satisfy the threshold requirements. The Claimant referred to the "UK Uber case," which determined that Uber drivers are employees. The case was resolved in Uber BV, and Others v. Aslam and Others (2021) UKSC 5 and was referred to as "the UK Uber case." Grab, on the other hand, argued that the facts of the Uber case are factually different and that the New Zealand judgement in Arachchige v. Rasier New Zealand Ltd & Uber BV (2020) NZEmpC 230 ("NZ Uber Case") (finding that e-hailing drivers are not workers) applicable in this particular scenario. The High Court decided that Grab was in the right, and as a result, it decided to dismiss the claim that the Claimant had brought (Uchiyama et al., 2022). Because of the recent events, many people in Malaysia are still looking for work at gig firms like FoodPanda and Grabcar, amongst others. Particular attention is given to platform capitalism, a deregulation process that has destabilised employment, eliminated the boundaries between businesses and altered the distinguishing characteristics of different types of labour.

Although the larger conversation should justifiably centre on work and social control, social imagination and practices still need to be considered. The recent struggles of delivery riders and their participation in grassroots mobilisations in economically depressed urban areas, the utilisation of platforms for the creation of exchange networks between urban and rural activities, and the reshaping of the urban environment through the farming of seasonal produce are all examples that provide glimpses of possible new

forms of social experimentation (Cingolani, 2022). In light of the C19 pandemic, the gig economy has become an increasingly important segment of the labour market in this country. People under 40 are more likely to engage in freelance arrangements than full-time jobs. Research on the reasons for and consequences of this shift has focused on objective measures of income, working hours, and employment conditions. However, there has been little work exploring Malaysians' subjective experiences of the gig economy without discreet employment laws governing their employment. Although today's gig economy has given many people access to a new kind of work, how it is implemented in Malaysia is still founded on the employment paradigms of the past. Despite the significance of the gig economy, which is regarded as a game-changer in Malaysia, much research has yet to be done on the factors that drive FDRs, such as gig labour and their participation in the gig economy during the C19 epidemic.

A greater emphasis was placed not on FDRs but on determining FDPs and customer views. Even though a few studies have concentrated on FDRs, these studies have only looked at motivational variables and elements that may preclude FDRs' participation. This situation leaves additional factors, or "moorings," to be left unexplored. This study suggests using migration studies to identify and analyse the variables that influence the continuous engagement of gig workers in the gig economy. This research expands the Push-Pull (PP) framework to add mooring aspects to investigate multiple antecedents better to comprehend FDR's participation in Malaysia's gig economy. By investigating all of the hypothesised connected antecedents, this study provides some theoretical and practical recommendations for FDRs. It may help critical stakeholders reasonably secure FDRs' employment and well-being in the country.

# 1.4 Research Objectives (RO)

The objectives of this study are divided into general and specific, which are as follows:

# 1.4.1 General Objective

This study aims to determine the relationships between push, pull, and mooring factors and FDRs' intention to participate in the gig economy.

# 1.4.2 Specific Objectives

More specifically, the current study aims to:

- 1. Examine the relationship between push factors and FDRs' intention to participate in the gig economy.
- 2. Examine the relationship between pull factors and FDRs' intention to participate in the gig economy.

- 3. Investigate the relationship between the mooring factor and FDRs' intention to participate in the gig economy.
- 4. Investigate if the mooring factor moderates the relationship between push-pull factors and FDRs' intention to participate in the gig economy.

# 1.5 Research Question (RQ)

After aligning all the objectives, this study attempts to answer the following research questions:

- RQ1: Do push factors affect FDRs' intention to participate in the gig economy?
- RQ2: Do pull factors affect FDRs' intention to participate in the gig economy?
- RQ3: Does the mooring factor affect FDRs' intention to participate in the gig economy?
- RQ4: Does the mooring factor moderate the relationship between push-pull factors and FDRs' intention to participate in the gig economy?

# 1.6 Scope of the Study

This research focuses on the gig economy in the real world, as opposed to the internet gig economy more generally. According to Vallas and Schor (2020), platforms like Uber and Airbnb, as well as food delivery services, are included in what is often referred to as the sharing economy, another name for the physical gig economy. These websites and mobile apps, sometimes called platforms, depending on their users to give customers their material and human resources. Platforms may be mobile or desktop based. Many people who make their rents and services available via these websites (sometimes referred to as providers) do it on a casual or part-time basis (Burtch et al., 2018).

A significant number of service providers seek to earn money from pre-existing home assets, such as unused rooms or personal automobiles, to do so. Because of the fact that these platforms make it possible for such assets to be used by a more significant number of people, they are sometimes grouped and referred to as components of the sharing economy. Platforms for the sharing economy offer users a venue for discussion, a standard set of contractual conditions, and a safe way of payment (Meijerink & Keegan, 2019). Workers in this category need to possess the physical capital necessary to supply the questioned services and employ the labour needed to do so directly. These physical gig workers offer a platform to conduct trades and, in return, charge a fee for each completed transaction (Bajwa et al., 2018). A study's population is, briefly, the total number of persons that participated in the research in some capacity, as determined by a headcount of all of the factors that the conclusions of the study attempt to reflect (Sekaran, 2003). A population that has been precisely characterised guarantees that the findings and conclusions may be applied to the appropriate subcategory of components in the gig economy of the nation (Montgomery & Baglioni, 2020).

The primary purpose of the research is to investigate the characteristics that motivate physically based gig economy self-employed individuals, such as FDRs, to maintain their participation in the gig economy. To be able to pay closer attention to food delivery companies in a comprehensive assessment of influencing factors, the multiple case study strategy presents the FDRs of the five selected FDPs, consisting of FoodPanda, GrabFood, BungkusIt, HomeTaste, and Dahmakan which are operating within Klang Valley, Malaysia as the central populations under this study.

# 1.7 Significance of the Study

The study brings contributions in both theoretical and practical aspects. The underlying motives studied may be applied to the future implementation of any labour education or improvement program for effective laws and regulations by Malaysian authority bodies, such as the Ministry of Human Resources (MoHR), Department of Statistics Malaysia (DoSM), and Labour Department Peninsular Malaysia (LDPM). The following subsections describe in detail the significance of this study.

# 1.7.1 Literature and Body of Knowledge

Hao (2020) asserted that platforms have become integral to modern life. Instead of amassing wealth through physical control of industrial facilities, platforms do so by facilitating communication between users. Most notably, ride-hailing services like Uber, Grab, and Gojek highlight platform work's precarious nature and the dual nature of platform worker status as capitalists' labour. The geographical context of platform capitalism has mainly been ignored in favour of studies examining its economic and social effects. Li (2018) added that companies like Uber and Grab have entirely reshaped the ride-hailing market in a short amount of time. Recent studies have examined how ridesharing services affect the economy and technology. This study further added that few studies had investigated the social implications of this shift, especially drivers' roles in the gig economy's novel and sometimes-paradoxical institutional frameworks. As a result, of this change in the ride-hailing industry, drivers are now subject to the requirements of both the government and the companies they work for, which might be in direct conflict with one another.

According to Hauben et al. (2020), it is challenging to undertake comparative research that can provide findings or generalisations because the information is so dispersed and depends on different definitions and conceptualisations, methodology and data sources. It has been argued that some of the available research findings and survey results need to be revised due to vague or overly specific ideas, problems with measurement, or small sample sizes. More work is required to collect various types of data. Platform work and digital work intermediation platforms require more standardised concepts and definitions. Khozen et al. (2021) added that there are still gaps in our understanding of platform work in several important ways, including the prevalence and characteristics of online platform work, under-declared work, cross-border platform work, the coordination of social security for platform workers working across borders, the role of private digital intermediaries in the functioning of the labour market. One prominent

example is working on hybrid platforms, in which one set of actors interacts with another set of actors already present in the market. On top of that, some platform workers, such as those who work across borders, are often ignored. Knowledge gaps continue, and what effect of changes in the legislative framework still needs to be clarified. This study outcome adds to the present body of knowledge and sheds light on the participative behaviour of Malaysians in the gig economy. Besides, it was challenging to compile a comprehensive study on the gig economy within Malaysia since this area is acknowledged as a grey area. Hence, this study presents findings exploring factors affecting FDRs' intention to participate in the gig economy.

#### 1.7.2 Theoretical Significance

This study will offer something of worth to the previous research in several different ways. The push-pull-moorings (PPM) hypothesis from human migration is utilised to demonstrate the switching intention of self-employed workers in the gig economy. PPM originates from the study of human migration. In addition, the PPM will be expanded to depict the effect that the C19 epidemic will have on the job situation. The push-pull migration model was first presented by (Ravenstein, 1885). The PPM is an upgrade that was made to that model. To this day, one of the most often used frameworks for understanding human migration is known as the push-pull paradigm (Cohen, 1996).

# 1.7.2.1 Strengthening of the Results

The PPM model is the preeminent paradigm in the migration literature, and it serves to remind scholars that personal concerns and cultural values are equally significant aspects of migration. The marketing discipline has benefited from the use of the PPM paradigm. According to Bansal and Eiselt (2004), the PPM model offered a unified framework for situating the indicators that may be discovered in the current service switching research. These predictors included quality, satisfaction, and value. They discovered that the PPM model worked well as a helpful framework to describe the switching behaviour of customers once they included these variables in the model. This research offers empirical data about the applicability of PPM on the motivation of employees in the gig economy hence strengthening the past researches results (Sevilla, 2020); (Angelucci, 2020); (Keith et al., 2019); (Karlsson & Wranne, 2019); and (Paul, 2019).

# 1.7.2.2 Developing Logics

The second contribution this research makes to workers' motivation in the gig economy is that it develops logic by identifying novel antecedents to PPM components in the context of employee motivation in the gig economy. PPM was used in previous research to discover and analyse the characteristics that influence the continuing engagement of employees (Huang et al., 2020). Since this research focuses on the elements that influence workers' participation behaviour in the gig economy, this study serves as the theoretical foundation for investigating employees' motivation in the gig economy. In the context of workers' motivation, the following antecedents have been identified: low pay,

inconsistent income, absence of benefits and protections, responsibility for one's taxes and expenses, potential for stress and burnout, low barrier to entry, flexibility, variety, independence, opportunity to try new jobs, retrenchment, temporary layoff, unpaid leave, pay cut, and the ability to work from home. This research provides empirical data that helps to boost employees' motivation in the gig economy literature on encouraging switching behaviour and attitude of gig economy workers. Hence, the second theoretical significance of this study is that it helps develop the logic that reconciles predictions from past researches (Sevilla, 2020); (Angelucci, 2020); (Keith et al., 2019); (Karlsson & Wranne, 2019); and (Paul, 2019).

# 1.7.2.3 Expanding the Framework

According to this concept, migration is seen as an interaction between the push effect at the starting location and the pull effect at the destination. People are compelled to leave their native location because of push effects, which are unfavourable influences. A dearth of employment possibilities and unfavourable weather conditions are also examples of push effects. On the other hand, pull effects are the excellent qualities of the location that entice people to visit. These positive elements pull people in. Examples of pull effects include improved economic growth, employment prospects, and increased salaries (Lee, 1966). The push-pull paradigm needs to provide a satisfactory explanation for the movement of persons.

Migration choices are influenced by various normative and psychological factors, which several academics have acknowledged. Within the context of a conversation on push-and-pull dynamics, Lee (1966) brought up the ideas of "intervening impediments" and "personal variables." Moon (1995) proposed the PPM model to explain people's migration. This model expands the Push-Pull model that incorporates the mooring notion. This study expands the past frameworks. Exploring new nuances of gig workers' participation, this study expands the past researchers' studies made (Sevilla, 2020); (Angelucci, 2020); (Keith et al., 2019); (Karlsson & Wranne, 2019); and (Paul, 2019).

# 1.7.2.4 Contributing to Limited Research

This research contributes new knowledge to the existing body of literature by determining a mediating condition for the PPM caused by the lack of employment protection. In this research, the lack of employment protection is modelled as a moderator. This empirical support for the moderator boosts employees' motivation in the gig economy literature in Malaysia by segmenting whether gig workers who engage in the gig economy were retrenched, temporarily laid off, gone on unpaid leave, experienced a pay drop, or worked from home. This study contributes factors associating with the push-pull-mooring theory (Sevilla, 2020); (Angelucci, 2020); (Keith et al., 2019); (Karlsson & Wranne, 2019); and (Paul, 2019).

#### 1.7.3 Practical Significance

Gig economies are those economies in which people display their abilities, whether in incompetent work markets like Grab driving or as skilled experts like coders who offer their services on websites. People highlight their abilities in incompetent work markets like Grab driving and skilled expert work markets like coders who offer their services on websites. In any event, a significant number of workers are forced into the gig economy rather than choosing to participate in it voluntarily (Friedman, 2014). The Malaysian government gains a great deal economically from the gig economy, particularly in terms of expanding existing enterprises and contributing to the country's overall growth. As a result, the government has to investigate the predicament of the people working in the gig economy. Workers participating in the gig economy are not considered employees because of the industry's structure. Malaysia has to develop and implement appropriate legislation to protect both enterprises and independent contractors who participate in the gig economy. For instance, if there is a disagreement, gig workers such as those employed by Foodpanda should be protected in the Labour or Industrial Court (Paul, 2019).

# 1.7.3.1 Establishing Reasonable Policies and Guidelines

Investigating employees' experiences, considering the material impacts of the C19 epidemic, can enlighten many stakeholders on how circumstances for flexible working relationships may be improved over the long run. Employees' experiences during and after the C19 outbreak will supply online labour platforms and contracting businesses with knowledge of the workers' requirements. Platforms can use these insights to align their infrastructure and services better to achieve sustainability. In particular, this can be accomplished by minimising the depletion of workers through support, promoting their work performance, and thereby improving the quality of their workforce. Workers' experiences during the pandemic will highlight the risks and opportunities of flexible employment relationships and foster a deeper understanding of the potential role of stakeholders such as platforms, unions, and federal offices in driving sustainability in flexible employment relationships. For society, this will result in a better understanding of the potential role of these stakeholders in driving sustainability in flexible employment relationships. If feasible, this should result in the formulation and adoption of brand-new rules and regulations that assist employees engaged in flexible employment arrangements. This study helps establishing reasonable policies and guidelines to safeguard gig workers' employment (Seargeant, 2017), and (Rachmawati et al., 2022).

#### 1.7.3.2 Promulgating Laws

Finally, yet importantly, workers with flexible employment will gain a greater awareness of the impact that their working conditions have on their health, as well as the impact those conditions have on their work and the development of their careers. This situation could lead to the empowerment of workers in the form of conscious self-care and the request for workers' rights. This study may promote the promulgation of the existing laws for gig workers (Seargeant, 2017), and (Rachmawati et al., 2022).

# 1.8 Assumptions of the Study

Participants in this research were individuals who worked in the Klang Valley as food delivery riders. The educational levels of these FDRs vary from those who have completed high school to those who have earned PhDs. Because of this, the research presumes that each participant will be truthful and honest throughout the process. Since this factor influenced the findings of the investigation, there is no question that the assumptions mentioned in this study served as the basis for reliable and legitimate research work.

# 1.9 Definition of Terms

This research identifies fourteen different constructs that will be employed during this investigation, and each one is discussed in detail. The definitions of the constructs are based on the frequently accepted meanings used by the researchers of past studies. **Table 1** depicts the precise definition that should be used in this study.

Table 1: Terms and Definitions of the Study

Terms	Definitions
Economic Necessities (EN)	Insolvency or circumstances where funds are lacking to maintain reasonable level of service and care (Manyika et al., 2016a), (Sevilla, 2020), (Bajwa et al., 2018), and (Graham et al., 2017).
Limited Alternatives (LA)	Actions which may reasonably be available to achieve the same or altered purpose of the proposed action, including the alternative of no action (Manyika et al., 2016a), (Sevilla, 2020), (Bajwa et al., 2018), (Graham et al., 2017).
Extra Income (EI)	Additional money that one earns or receive, as opposed to the money they have to spend or pay out (Keith et al., 2019), and (Angelucci, 2020).
Flexibility (F)	A strategy of responding to changing circumstances and expectations (Angelucci, 2020), (Keith et al., 2019), (Bajwa et al., 2018), and (Sevilla, 2020).
Control and Autonomy (CA)	The extent to which employees have control and discretion of how to conduct their work (Angelucci, 2020), (Keith et al., 2019), (Bajwa et al., 2018), and (Sevilla, 2020).
Enjoyment (E)	The state or process of taking pleasure or the action of possessing and benefiting from something at work (Angelucci, 2020), (Keith et al., 2019), (Bajwa et al., 2018), and (Sevilla, 2020).
Lack of Employment Protection (LEP)	An insufficiency, shortage, or absence of relevant laws governing ones' employment that is desired or required (Paul, 2019), (Rachmawati et al., 2022), and (Sargeant, 2017).
Intention to Participate (ITP)	The action or fact of intending to join or receive part of something (Huang et al., 2020).

#### 1.10 Organization of the Thesis

This thesis has been organised in a manner that is consistent from chapter to chapter in order to make it easier to read. In Chapter One, we discuss the historical context of the study, the issue statement, the research question, the research goals, the importance of the study, and the scope of the investigation. After that comes Chapter Two, which summarises the research that has been done on the subject of what motivates employees in the gig economy. In addition, it examines the elements that had a role in employees' engagement during the C19 pandemic. The conceptual foundation of the study is outlined in Chapter Three, as well as the formulation of hypotheses.

# 1.11 Chapter Summary

This chapter lays out an organised strategy for the research that will be conducted for the subsequent chapters. This chapter explained the history of the study, emphasised the issue statements, enumerated the research aims and questions, and discussed the importance of the study. In addition to that, the definitions of the variables that were used in this research are dissected as well. The next chapter provides a summary of relevant prior research used in the design of the structure of this study.

#### REFERENCES

- Abd Rahman, N. H., Ismail, S., Ridzuan, A. R., & Abd Samad, K. (2020). The issue of graduate unemployment in Malaysia: Post Covid-19. *International Journal of Academic Research in Business and Social Sciences*, 10(10), 834-841.
- Abhari, S., Jalali, A., Jaafar, M., & Tajaddini, R. (2021). The impact of Covid-19 pandemic on small businesses in tourism and hospitality industry in Malaysia. *Journal of Research in Marketing and Entrepreneurship*.
- Abraham, K. G., Haltiwanger, J. C., Hou, C., Sandusky, K., & Spletzer, J. R. (2021). Reconciling survey and administrative measures of self-employment. *Journal of Labor Economics*, 39(4), 825-860.
- Afthanorhan, W. (2013). A comparison of partial least square structural equation modeling (PLS-SEM) and covariance based structural equation modeling (CB-SEM) for confirmatory factor analysis. *International Journal of Engineering Science and Innovative Technology*, 2(5), 198-205.
- Ahmad, N. (2020). Mapping gig workers as the new economy post COVID-19.
- Ahmad, S., & Afthanorhan, W. M. A. B. W. (2014). The importance-performance matrix analysis in partial least square structural equation modeling (PLS-SEM) with smartpls 2.0 M3. *International Journal of Mathematical Research*, 3(1), 1-14.
- Ahsan, M. (2020). Entrepreneurship and ethics in the sharing economy: A critical perspective. *Journal of Business Ethics*, 161(1), 19-33.
- Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. In (Vol. 26, pp. 1113-1127): Taylor & Francis.
- Ajzen, I. (2012). Attitudes and persuasion.
- Akbar, Y. H., & Tracogna, A. (2018). The sharing economy and the future of the hotel industry: Transaction cost theory and platform economics. *International Journal of Hospitality Management*, 71, 91-101.
- Allison, L. (2020). Legal bump at starting line: E-hailing driver's case may not reach court.
- Allison, P. D. (2003). Missing data techniques for structural equation modeling. *Journal of abnormal psychology*, 112(4), 545.
- Aloisi, A. (2016). Commoditized Workers. Case Study Research on Labour Law Issues Arising from a Set of On-Demand/Gig Economy Platforms. Case Study Research on Labour Law Issues Arising from a Set of On-Demand/Gig Economy Platforms (May 1, 2016). Comparative Labor Law & Policy Journal, 37(3).
- Aloulou, W., & Fayolle, A. (2005). A conceptual approach of entrepreneurial orientation within small business context. *Journal of Enterprising Culture*, *13*(01), 21-45.

- Altenried, M. (2021). Mobile workers, contingent labour: Migration, the gig economy and the multiplication of labour. *Environment and Planning A: Economy and Space*, 0308518X211054846.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, *103*(3), 411.
- Andreev, P., Heart, T., Maoz, H., & Pliskin, N. (2009). Validating formative partial least squares (PLS) models: methodological review and empirical illustration.
- Andrews, D., Nonnecke, B., & Preece, J. (2007). Conducting research on the internet: Online survey design, development and implementation guidelines.
- Angelucci, S. (2020). Exploring different types of Multiple Job Holding through the Gig Economy: their Push and Pull factors University of Twente].
- Anggraeni, F. N. (2020). Survey Motivasi Kerja Driver Ojek Online Grab. Scientific Journal of Reflection: Economic, Accounting, Management and Business, 3(3), 251-260.
- Apouey, B., Roulet, A., Solal, I., & Stabile, M. (2020). Gig workers during the COVID-19 crisis in France: financial precarity and mental well-being. *Journal of urban health*, 97(6), 776-795.
- Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of marketing research*, 14(3), 396-402.
- Arora, M., Singh, H., & Gupta, S. (2021). What drives e-hailing apps adoption? An analysis of behavioral factors through fuzzy AHP. *Journal of Science and Technology Policy Management*.
- Arumugam, V., Ismail, M., & Joeharee, M. (2020). A review and conceptual development of the factors influencing consumer intention towards E-hailing service in Malaysia. *International Journal of Innovation, Creativity and Change*, 11(11), 224-242.
- Ashford, S. J., Caza, B. B., & Reid, E. M. (2018). From surviving to thriving in the gig economy: A research agenda for individuals in the new world of work. *Research in Organizational Behavior*, *38*, 23-41.
- Ashkrof, P., de Almeida Correia, G. H., Cats, O., & van Arem, B. (2022). Ride acceptance behaviour of ride-sourcing drivers. *Transportation Research Part C: Emerging Technologies*, 142, 103783.
- Asih, S. N., Sucahyo, Y. G., Gandhi, A., & Ruldeviyani, Y. (2019). Inhibiting motivating factors on online gig economy client in Indonesia. 2019 International conference on advanced computer science and information systems (ICACSIS).
- Awi, E., Aviles, J., Cervania, F., Flores, M., Maallo, A. M., & June, L. (2021). The 'Delivery Rider Students' Amid the Pandemic and Its Implication to Online Learning Education.

- Azhar, N. A. Z. M., & Shakil, N. S. M. (2021). The Intervention of Micro, Small and Medium Enterprises (MSMEs) in Malaysia's Digital Economy. *Global Business & Management Research*, 13(4).
- Aziz, N. A. B., Mustapha, S. Z., Hassim, N. H., & Shaari, N. F. (2021). Improving social security among older persons in Malaysia during Covid-19 by applying best practices from other countries. *International Journal Academic Research in Business and Social Sciences*, 11(8), 1568-1578.
- Babbie, E. R. (2020). The practice of social research. Cengage learning.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal* of the academy of marketing science, 16(1), 74-94.
- Bajwa, U., Gastaldo, D., Di Ruggiero, E., & Knorr, L. (2018). The health of workers in the global gig economy. *Globalization and health*, 14(1), 1-4.
- Bansal, H., & Eiselt, H. A. (2004). Exploratory research of tourist motivations and planning. *Tourism management*, 25(3), 387-396.
- Barley, S. R., Bechky, B. A., & Milliken, F. J. (2017). The changing nature of work: Careers, identities, and work lives in the 21st century. In (Vol. 3, pp. 111-115): Academy of Management Briarcliff Manor, NY.
- Barrett, J. P. (1974). The coefficient of determination—some limitations. *The American Statistician*, 28(1), 19-20.
- Barroso, A., González-López, Ó. R., Sanguino, R., & Buenadicha-Mateos, M. (2018). Analysis and evaluation of the largest 500 family firms' websites through PLS-SEM technique. *Sustainability*, 10(2), 557.
- Barzilay, A. R., & Ben-David, A. (2016). Platform inequality: Gender in the gigeconomy. Seton Hall L. Rev., 47, 393.
- Bates, L. K., Zwick, A., Spicer, Z., Kerzhner, T., Kim, A. J., Baber, A., Green, J. W., & Moulden, D. T. (2019). Gigs, side hustles, freelance: What work means in the platform economy city/Blight or remedy: Understanding ridehailing's role in the precarious "gig economy"/Labour, gender and making rent with Airbnb/The gentrification of 'sharing': From bandit cab to ride share tech/The 'sharing economy'? Precarious labor in neoliberal cities/Where is economic development in the platform city?/Shared economy: WeWork or We Work together. *Planning Theory & Practice*, 20(3), 423-446.
- Bauer, C., Mladenow, A., & Strauss, C. (2014). Fostering collaboration by location-based crowdsourcing. International Conference on Cooperative Design, Visualization and Engineering.
- Becker, J.-M., Klein, K., & Wetzels, M. (2012). Hierarchical latent variable models in PLS-SEM: guidelines for using reflective-formative type models. *Long range planning*, 45(5-6), 359-394.

- Becker, J.-M., Ringle, C. M., & Sarstedt, M. (2018). Estimating moderating effects in PLS-SEM and PLSc-SEM: Interaction term generation\* data treatment. *Journal of Applied Structural Equation Modeling*, 2(2), 1-21.
- Bell, S. (2009). Experimental design. *International Encyclopedia of Human Geography*, 3, 672-675.
- Berg, H. (2022). Reading Gigs Dialectically. Critical Historical Studies, 9(1), 35-61.
- Berg, J., Furrer, M., Harmon, E., Rani, U., & Silberman, M. S. (2018). Digital labour platforms and the future of work. *Towards Decent Work in the Online World. Rapport de l'OIT*.
- Berger, T., Frey, C. B., Levin, G., & Danda, S. R. (2019). Uber happy? Work and wellbeing in the 'gig economy'. *Economic Policy*, 34(99), 429-477.
- Bhavnani, K.-K., Chua, P., & Collins, D. (2014). Critical approaches to qualitative. *The Oxford handbook of qualitative research*, 165.
- Bidin, A., Radzi, M. S. N. M., Harun, N., Salleh, K., & Hamid, N. A. (2021). Legal Protections of Gig Workers in Employment. *LAW*, *POLITICS & SOCIETY: The Unravelling of Malaysia and Indonesia Potentiality*, 103.
- Bieber, F., & Moggia, J. (2021). Risk shifts in the gig economy: The normative case for an insurance scheme against the effects of precarious work. *Journal of Political Philosophy*, 29(3), 281-304.
- Blundell, R., Costa Dias, M., Joyce, R., & Xu, X. (2020). COVID-19 and Inequalities. *Fiscal studies*, 41(2), 291-319.
- Brancati, C. U., Fernández-Macías, E., & Pesole, A. (2019). Digital labour platforms in Europe: Numbers, profiles, and employment status of platform workers. *Text, July* (<a href="https://ec. europa. eu/jrc/en/publication/digital-labour-platforms-europe-numbersprofiles-and-employment-status-platform-workers">https://ec. europa. eu/jrc/en/publication/digital-labour-platforms-europe-numbersprofiles-and-employment-status-platform-workers</a>).
- Brayley, N., Obst, P. L., White, K. M., Lewis, I. M., Warburton, J., & Spencer, N. M. (2015). Examining the predictive value of combining the theory of planned behaviour and the volunteer functions inventory. *Australian Journal of Psychology*, 67(3), 149-156.
- Broughton, A., Gloster, R., Marvell, R., Green, M., & Martin, A. (2018). The experiences of individuals in the gig economy.
- Buncaras, Z., Trucilla, L., Rodriguez, K., Ayapana, M., Interia, J., Gumapas, A., Martin, J., & Tus, J. (2022). Food at Speed of a Click: The Experiences and Challenges Faced by Food Delivery Riders Amidst the COVID-19 Pandemic.
- Burns, T. R., & Flam, H. (1987). *The shaping of social organization: Social rule system theory with applications*. Sage Publications.
- Burtch, G., Carnahan, S., & Greenwood, B. N. (2018). Can you gig it? An empirical examination of the gig economy and entrepreneurial activity. *Management*

- Science, 64(12), 5497-5520.
- Cameron, L. D. (2022). "Making Out" While Driving: Relational and Efficiency Games in the Gig Economy. *Organization Science*, *33*(1), 231-252.
- Castillo, J., & Zhangallymbay, D. (2020). Impactos económicos del COVID-19, encuesta sobre el impacto y perspectivas del sector de bares y restaurantes. *Centro de Investigaciones Económicas (CIEC), Escuela Superior Politécnica del Litoral. Retrieved on May*, 8, 2020.
- Cenfetelli, R. T., & Bassellier, G. (2009). Interpretation of formative measurement in information systems research. *MIS quarterly*, 689-707.
- Cepeda-Carrion, G., Cegarra-Navarro, J.-G., & Cillo, V. (2018). Tips to use partial least squares structural equation modelling (PLS-SEM) in knowledge management. *Journal of Knowledge Management*.
- Chai, L. T., & Yat, D. N. C. (2019). Online food delivery services: Making food delivery the new normal. *Journal of Marketing advances and Practices*, 1(1), 62-77.
- Chang, H. H., & Meyerhoefer, C. D. (2021). COVID-19 and the demand for online food shopping services: Empirical Evidence from Taiwan. *American Journal of Agricultural Economics*, 103(2), 448-465.
- Chang, Y.-W., & Hsu, P.-Y. (2019). An empirical investigation of organizations' switching intention to cloud enterprise resource planning: a cost-benefit perspective. *Information Development*, 35(2), 290-302.
- Chen, M. K., Rossi, P. E., Chevalier, J. A., & Oehlsen, E. (2019). The value of flexible work: Evidence from Uber drivers. *Journal of political economy*, 127(6), 2735-2794.
- Chen, P., & Chankov, S. M. (2017). Crowdsourced delivery for last-mile distribution: An agent-based modelling and simulation approach. 2017 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM).
- Chen, S. H. (2020). The qualitative study of job satisfaction and commitment of delivery men in online food industry in Bangkok.
- Chern, B. T. P., & Ahmad, F. B. S. (2020). Supply chain evolution. A study of opportunities and challenges of virtual kitchens in Malaysia. *Journal of Critical Reviews*, 7(16), 361-368.
- Chin, W., Marcolin, B., & Newsted, P. (1996). A PLS Latent Variable modelling approach for measuring interaction effects: Results from a Monte-Carlo simulation study and voice mail emotion/adoption study. Proceedings of the 17th International Conference on Information Systems.
- Chin, W. W. (2010). How to write up and report PLS analyses. In *Handbook of partial least squares* (pp. 655-690). Springer.
- Cho, M., Bonn, M. A., & Li, J. J. (2019). Differences in perceptions about food delivery

- apps between single-person and multi-person households. *International Journal of Hospitality Management*, 77, 108-116.
- Chou, S.-Y., Shen, G. C., Chiu, H.-C., & Chou, Y.-T. (2016). Multichannel service providers' strategy: Understanding customers' switching and free-riding behavior. *Journal of Business Research*, 69(6), 2226-2232.
- Christie, N., & Ward, H. (2018). The emerging issues for management of occupational road risk in a changing economy: a survey of gig economy drivers, riders and their managers. *London: UCL Centre for Transport Studies*.
- 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.
- Churchill, B., & Craig, L. (2019). Gender in the gig economy: Men and women using digital platforms to secure work in Australia. *Journal of Sociology*, 55(4), 741-761.
- Cingolani, P. (2022). A Pandemic-related Turning Point: Precarious Work, Platforms and Utopian Energies. In *Faces of Precarity* (pp. 146-158). Bristol University Press.
- Cohen, R. (1996). Diasporas and the nation-state: from victims to challengers. *International affairs*, 72(3), 507-520.
- Crossman, A. (2020). Understanding functionalist theory: One of the major theoretical perspectives in sociology. *Recuperado de <a href="https://www.thoughtco.com/functionalist-perspective-3026625">https://www.thoughtco.com/functionalist-perspective-3026625</a>.*
- Crotty, S., Felgner, P., Davies, H., Glidewell, J., Villarreal, L., & Ahmed, R. (2003). Cutting edge: long-term B cell memory in humans after smallpox vaccination. *The Journal of Immunology*, *171*(10), 4969-4973.
- Curchod, C., Patriotta, G., Cohen, L., & Neysen, N. (2020). Working for an algorithm: Power asymmetries and agency in online work settings. *Administrative Science Quarterly*, 65(3), 644-676.
- De Groen, W., & Maselli, I. (2016). The impact of the collaborative economy on the labour market.
- De Jesus, D. S. V. (2021). Living on the edge: Brazilian creative workers in the gig economy during the COVID-19 pandemic. *Psychology (Irvine, Calif.)*, 11(2), 56-62.
- De Stefano, V. (2015). The rise of the just-in-time workforce: On-demand work, crowdwork, and labor protection in the gig-economy. *Comp. Lab. L. & Pol'y J.*, 37, 471.
- De Stefano, V., Durri, I., Stylogiannis, C., & Wouters, M. (2022). A Research Agenda for the Gig Economy and Society.
- DeLiema, M., Bosley, S., & Shadel, D. (2021). Multi-Level Marketing as "Gig" Work:

- Worker Motivations, Characteristics, and Outcomes in the US. *Journal of Labor and Society*, 25(1), 83-121.
- DeMaio, T. J., Rothgeb, J., & Hess, J. (1998). *Improving survey quality through pretesting*. Citeseer.
- Deng, X., Joshi, K. D., & Galliers, R. D. (2016). The Duality of empowerment and marginalization in microtask crowdsourcing. *MIS quarterly*, 40(2), 279-302.
- Dhingra, D., Ashok, S., Sinha, N., & Kulkarni, M. S. (2022). Sustainability in the Gig Economy: An Indian Perspective. In *Disruptive Innovation and Emerging Technologies for Business Excellence in the Service Sector* (pp. 230-246). IGI Global.
- Dong, H., Zhong, S., Xu, S., Tian, J., & Feng, Z. (2021). The relationships between traffic enforcement, personal norms and aggressive driving behaviors among normal e-bike riders and food delivery e-bike riders. *Transport policy*, 114, 138-146.
- Donovan, S. A., Bradley, D. H., & Shimabukuru, J. O. (2016). What does the gig economy mean for workers?
- Doorn, N. v. (2020). At what price? Labour politics and calculative power struggles in on-demand food delivery. *Work Organisation, Labour & Globalisation*, 14(1), 136-149.
- Dormann, C. F., Elith, J., Bacher, S., Buchmann, C., Carl, G., Carré, G., Marquéz, J. R. G., Gruber, B., Lafourcade, B., & Leitão, P. J. (2013). Collinearity: a review of methods to deal with it and a simulation study evaluating their performance. *Ecography*, 36(1), 27-46.
- Doucette, M. H., & Bradford, W. D. (2019). Dual job holding and the gig economy: Allocation of effort across primary and gig jobs. *Southern Economic Journal*, 85(4), 1217-1242.
- Dougherty, E. R., Kim, S., & Chen, Y. (2000). Coefficient of determination in nonlinear signal processing. *Signal Processing*, 80(10), 2219-2235.
- Drahokoupil, J., & Piasna, A. (2019). Work in the platform economy: Deliveroo riders in Belgium and the SMart arrangement. *ETUI Research Paper-Working Paper*.
- Dredge, D., & Gyimóthy, S. (2015). The collaborative economy and tourism: Critical perspectives, questionable claims and silenced voices. *Tourism recreation research*, 40(3), 286-302.
- Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2020). Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM. *Human Resource Management Journal*, 30(1), 114-132.
- Dunn, M. (2020). Making gigs work: digital platforms, job quality and worker motivations. *New Technology, Work and Employment*, 35(2), 232-249.
- Eierman, M. A., Niederman, F., & Adams, C. (1995). DSS theory: A model of constructs

- and relationships. Decision Support Systems, 14(1), 1-26.
- El-Ebiary, Y. A. B., Aseh, K., Bamansoor, S., Pande, B., Abu-Ulbeh, W., Yusoff, M. H., Pathmanathan, P. R., Jusoh, J. A., & Al Moaiad, Y. (2021). Mobile Commerce and its Apps-Opportunities and Threats in Malaysia. 2021 2nd International Conference on Smart Computing and Electronic Enterprise (ICSCEE).
- Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural equation modeling*, 8(3), 430-457.
- Engelbart, D. C. (1962). Augmenting human intellect: A conceptual framework. *Menlo Park*, CA, 21.
- Farrell, D., & Greig, F. (2017). The online platform economy: Has growth peaked? *Available at SSRN 2911194*.
- Ferguson, N. M., Laydon, D., Nedjati-Gilani, G., Imai, N., Ainslie, K., Baguelin, M., Bhatia, S., Boonyasiri, A., Cucunubá, Z., & Cuomo-Dannenburg, G. (2020). Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand.
- Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research. *Philosophy and Rhetoric*, 10(2).
- Flanagan, F. (2019). Theorising the gig economy and home-based service work. *Journal of Industrial Relations*, 61(1), 57-78.
- Ford, M., & Honan, V. (2019). The limits of mutual aid: Emerging forms of collectivity among app-based transport workers in Indonesia. *Journal of Industrial Relations*, 61(4), 528-548.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. In: Sage Publications Sage CA: Los Angeles, CA.
- Friedman, G. (2014). Workers without employers: shadow corporations and the rise of the gig economy. *Review of Keynesian Economics*, 2(2), 171-188.
- Fu, J.-R. (2011). Understanding career commitment of IT professionals: Perspectives of push–pull–mooring framework and investment model. *International journal of information management*, 31(3), 279-293.
- Furuoka, F., Uchiyama, Y., Lim, B., Pazim, K. H., Kinabalu, S., Aruchunan, M. E., Paidi, R., Nikitina, L., Jingyi, L., & Omar, S. A. (2022). EFFECTS OF THE COVID-19 PANDEMIC ON GIG ECONOMY IN MALAYSIA: AN APPLICATION OF 'TRAGEDY OF THE COMMONS'.

- Galière, S. (2020). When food-delivery platform workers consent to algorithmic management: a Foucauldian perspective. *New Technology, Work and Employment*, 35(3), 357-370.
- Garthwaite, P. H., Kadane, J. B., & O'Hagan, A. (2005). Statistical methods for eliciting probability distributions. *Journal of the American statistical Association*, 100(470), 680-701.
- Gefen, D., Straub, D., & Boudreau, M.-C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the association for information systems*, *4*(1), 7.
- Geladi, P., & Kowalski, B. R. (1986). Partial least-squares regression: a tutorial. *Analytica chimica acta*, 185, 1-17.
- Geri, N., Gafni, R., & Bengov, P. (2017). Crowdsourcing as a business model: Extrinsic motivations for knowledge sharing in user-generated content websites. *Journal of Global Operations and Strategic Sourcing*, 10(1), 90-111.
- Germani, G. (1965). Migration and Acculturation'in PM Hauser (ed.) Handbook for Social Research. In: New York: UNESCO.
- Ghani, H. H. A., Abd Hamid, N., Sanusi, S., & Shamsuddin, R. (2020). The effect of tax knowledge, compliance costs, complexity and morale towards tax compliance among self-employed in Malaysia. *Global Business and Management Research*, 12(1), 18-32.
- Ghasemy, M., Teeroovengadum, V., Becker, J.-M., & Ringle, C. M. (2020). This fast car can move faster: A review of PLS-SEM application in higher education research. *Higher education*, 80(6), 1121-1152.
- Ghazali, A. J. B., & Muhammad, N. M. B. N. (2021). An Overview of Gigs Economy in Malaysia. *Nasrul Aiman Bin Abd Aziz Web designer*, 162.
- Gholami, R., Sulaiman, A. B., Ramayah, T., & Molla, A. (2013). Senior managers' perception on green information systems (IS) adoption and environmental performance: Results from a field survey. *Information & management*, 50(7), 431-438.
- Gleim, M. R., Johnson, C. M., & Lawson, S. J. (2019). Sharers and sellers: A multigroup examination of gig economy workers' perceptions. *Journal of Business Research*, 98, 142-152.
- Gökkoca, A. (2022). On-Demand Service Delivery Platforms and Value Destruction: Subjective Perceptions of Gig Workers.
- Golbraikh, A., & Tropsha, A. (2002). Beware of q2! *Journal of molecular graphics and modelling*, 20(4), 269-276.
- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information*

- Systems, 18(1), 185-214.
- Goods, C., Veen, A., & Barratt, T. (2019). "Is your gig any good?" Analysing job quality in the Australian platform-based food-delivery sector. *Journal of Industrial Relations*, 61(4), 502-527.
- Gräf, L. (2002). Assessing internet questionnaires: The online pretest lab. *Online social sciences*, 49-68.
- Graham, M., Hjorth, I., & Lehdonvirta, V. (2017). Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods. *Transfer: European review of labour and research*, 23(2), 135-162.
- Gregorio, (2021). <a href="https://www.philstar.com/headlines/2021/07/19/2113595/dole-urged-act-labor-issues-raised-food-delivery-riders.">https://www.philstar.com/headlines/2021/07/19/2113595/dole-urged-act-labor-issues-raised-food-delivery-riders.</a>
- Grix, J. (2002). Introducing students to the generic terminology of social research. *Politics*, 22(3), 175-186.
- Gudergan, S. P., Ringle, C. M., Wende, S., & Will, A. (2008). Confirmatory tetrad analysis in PLS path modeling. *Journal of Business Research*, 61(12), 1238-1249.
- Guo, J., Shan, S., Wang, Y., & Khan, Y. A. (2021). Analyzing Chinese customers' switching intention of smartphone brands: Integrating the push-pull-mooring framework. *Discrete Dynamics in Nature and Society*, 2021.
- Ha, S., Kim, J. P., & Park, Y. J. (2021). What to Learn from Three Years (2018-2021): Trends of Digital Platform Research.
- Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Understanding statistics*, 3(4), 283-297.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, *31*(1), 2-24.
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science*, 40(3), 414-433.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European business review*.
- Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. saGe publications.
- Hamari, J. (2015). Why do people buy virtual goods? Attitude toward virtual good purchases versus game enjoyment. *International journal of information management*, 35(3), 299-308.
- Hao, T. Y. (2020). PLATFORM GEOGRAPHIES: 'GRABBING' FROM THE OTHER

## SIDE.

- Harahap, L. K., & Pd, M. (2020). Analisis SEM (Structural Equation Modelling) dengan SMARTPLS (partial least square). Fakultas Sains Dan Teknologi Uin Walisongo Semarang, 1(1).
- Harrell Jr, F. (2001). Collinearity. Regression Modeling Strategies: With Applications to Linear Models, Logistic Regression, and Survival Analysis, 64-65.
- Hauben, H., Lenaerts, K., & Waeyaert, W. (2020). The platform economy and precarious work. *Study. Luxembourg*.
- Healy, J., Nicholson, D., & Pekarek, A. (2017). Should we take the gig economy seriously? *Labour & Industry: a journal of the social and economic relations of work*, 27(3), 232-248.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.
- Henten, A., & Windekilde, I. (2018). Implications of ICT-based platforms on labor markets—the case of Uber. *Ekonomiczne Problemy Usług*, *131*, 75-96.
- Horney, N. (2016). The gig economy: A disruptor requiring HR agility. *People and Strategy*, 39(3), 20.
- Hou, A. C., Chern, C.-C., Chen, H.-G., & Chen, Y.-C. (2011). 'Migrating to a new virtual world': Exploring MMORPG switching through human migration theory. *Computers in Human behavior*, 27(5), 1892-1903.
- Huang, L., Xie, G., Blenkinsopp, J., Huang, R., & Bin, H. (2020). Crowdsourcing for sustainable urban logistics: exploring the factors influencing crowd workers' participative behavior. *Sustainability*, 12(8), 3091.
- Huang, Y., & Chen, M. (2019). Improve reputation evaluation of crowdsourcing participants using multidimensional index and machine learning techniques. *IEEE Access*, 7, 118055-118067.
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic management journal*, 20(2), 195-204.
- Hwang, J., & Griffiths, M. A. (2017). Share more, drive less: Millennials value perception and behavioral intent in using collaborative consumption services. *Journal of Consumer Marketing*.
- Ivanova, M., Bronowicka, J., Kocher, E., & Degner, A. (2018). Foodora and Deliveroo: The App as a Boss? Control and autonomy in app-based management-the case of food delivery riders.
- Jabagi, N., Croteau, A.-M., Audebrand, L. K., & Marsan, J. (2019). Gig-workers' motivation: Thinking beyond carrots and sticks. *Journal of Managerial Psychology*.

- Jackson, J. B., Bowen, J., Walker, G., Labaune, J., Mourou, G., Menu, M., & Fukunaga, K. (2011). A survey of terahertz applications in cultural heritage conservation science. *IEEE Transactions on Terahertz Science and Technology*, 1(1), 220-231.
- Jackson John, A. (1986). Migration In Aspects of Modern Sociology: Social Processes. London and New York: Longman.
- Jais, A. S., & Marzuki, A. (2020). E-hailing services in Malaysia: current practices and future outlook. *Planning Malaysia*, 18.
- Jamaluddin, S. Z., Yuen Wah, F., & Abu Taher, M. (2021). Covid-19: a preliminary assessment on the social security framework for an aged Malaysia. *Commonwealth Law Bulletin*, 47(1), 55-71.
- Jeannotte, M. S. (2021). When the gigs are gone: Valuing arts, culture and media in the COVID-19 pandemic. *Social Sciences & Humanities Open*, *3*(1), 100097.
- Jeon, S.-H., Liu, H., & Ostrovsky, Y. (2019). *Measuring the gig economy in Canada using administrative data*. Statistics Canada= Statistique Canada.
- Jiang, L., Wagner, C., & Chen, X. (2021). Taking time into account: Understanding microworkers' continued participation in microtasks. *Journal of the Association for Information Systems*, 22(4), 9.
- Jung, J., Han, H., & Oh, M. (2017). Travelers' switching behavior in the airline industry from the perspective of the push-pull-mooring framework. *Tourism management*, 59, 139-153.
- Jupp, J. C., Berumen, F. C., & O'Donald, K. (2018). Advancing testimonio traditions in educational research: A synoptic rendering. *Journal of Latinos and Education*, 17(1), 18-37.
- Kabir, S. M. S. (2016). Basic guidelines for research: An introductory approach for all disciplines. *Book Zone Publication*.
- Kaine, S., & Josserand, E. (2019). The organisation and experience of work in the gig economy. *Journal of Industrial Relations*, 61(4), 479-501.
- Kaine, S., Josserand, E., Rawling, M., Boersma, M., & Johns, K. (2020). Inquiry into unlawful underpayment of employees' remuneration: Submission of the Centre for Business and Social Innovation UTS Business School.
- Kalleberg, A. L., & Dunn, M. (2016). Good jobs, bad jobs in the gig economy. *LERA for Libraries*, 20(1-2).
- Kalleberg, A. L., & Vallas, S. P. (2018). Probing precarious work: Theory, research, and politics. *Research in the Sociology of Work*, 31(1), 1-30.
- Kamilah, N., Kee, D. M. H., Syafiq, M., Aina, S., San Yap, H., Alqallaf, A. A., & Quttainah, M. A. (2020). Factors affecting organizational success: A case study of Foodpanda. *Journal of the Community Development in Asia (JCDA)*, 3(3),

- Kang, K., Wang, T., Chen, S., & Su, Y.-S. (2021). Push-Pull-Mooring Analysis of Massive Open Online Courses and College Students During the COVID-19 Pandemic. Frontiers in Psychology, 12.
- Kannan, R., Wang, I. Z. W., Ong, H. B., Ramakrishnan, K., & Alamsyah, A. (2021). COVID-19 impact: Customised economic stimulus package recommender system using machine learning techniques (preprint).
- Karim, W., Haque, A., Anis, Z., & Ulfy, M. A. (2020). The movement control order (MCO) for COVID-19 crisis and its impact on tourism and hospitality sector in Malaysia. *International Tourism and Hospitality Journal*, 3(2), 1-7.
- Karlsson, K., & Wranne, J. (2019). Motivation in the Gig Economy: A Case Study of Gig Workers in the IT and Business Consulting Industry.
- Katrodia, A. (2020). Job stress and insecurity among the employees in food delivery services. WSEAS Trans Environ Dev. 16, 718-724.
- Kee, D. M. H., binti Misbah, N., binti Nazril, N. A., & binti Musa, N. H. (2021). The Impact of COVID-19 on the fast-food industry in Malaysia. *Journal of the Community Development in Asia (JCDA)*, 4(2), 44-57.
- Keith, M. G., Harms, P., & Tay, L. (2019). Mechanical Turk and the gig economy: Exploring differences between gig workers. *Journal of Managerial Psychology*.
- Keith, M. G., Harms, P. D., & Long, A. C. (2020). Worker health and well-being in the gig economy: A proposed framework and research agenda. *Entrepreneurial and Small Business Stressors, Experienced Stress, and Well-Being*, 18, 1-33.
- Kerlinger, P., & Lein, M. R. (1986). Differences in winter range among age-sex classes of Snowy Owls Nyctea scandiaca in North America. *Ornis Scandinavica*, 1-7.
- Khozen, I., Setianty, I., & Meiriza, F. D. (2021). What Can We Learn from Business Innovation Fail-ure of Uber in Southeast Asia Market? *Inovbiz: Jurnal Inovasi Bisnis*, 9(1), 124-132.
- Kim, S., Choi, M. J., & Choi, J. S. (2019). Empirical study on the factors affecting individuals' switching intention to augmented/virtual reality content services based on push-pull-mooring theory. *Information*, 11(1), 25.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.
- Kock, N., & Gaskins, L. (2014). The mediating role of voice and accountability in the relationship between Internet diffusion and government corruption in Latin America and Sub-Saharan Africa. *Information Technology for Development*, 20(1), 23-43.
- Kock, N., & Lynn, G. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems*, 13(7).

- Korábová, E. (2019). Analysis of the sharing economy trend: The case of Uber. *LBS Working Paper*(6).
- Koustas, D. K. (2019). What do big data tell us about why people take gig economy jobs? AEA Papers and Proceedings.
- Koutsimpogiorgos, N., Van Slageren, J., Herrmann, A. M., & Frenken, K. (2020). Conceptualizing the gig economy and its regulatory problems. *Policy & Internet*, 12(4), 525-545.
- Kulanthayan, S., See, L. G., Kaviyarasu, Y., & Afiah, M. N. (2012). Prevalence and determinants of non-standard motorcycle safety helmets amongst food delivery workers in Selangor and Kuala Lumpur. *Injury*, 43(5), 653-659.
- Lee, E. S. (1966). A theory of migration. *Demography*, 3(1), 47-57.
- Lee, Y. (2021). After a Global Platform Leaves: Understanding the Heterogeneity of Gig Workers through Capital Mobility. *Critical Sociology*, 08969205211055912.
- 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.
- Lewchuk, W., De Wolff, A., King, A., & Polanyi, M. (2003). From job strain to employment strain: Health effects of precarious employment. *Just Labour*.
- Lewin, J. M. (2018). Embracing the new world of work. *Strategic Finance*, 99(12), 32-37.
- Li, A. W. (2018). In the Blindspot: Time, Risks and Rewards in Singapore's Ridesharing Industry.
- Li, C., Mirosa, M., & Bremer, P. (2020). Review of online food delivery platforms and their impacts on sustainability. *Sustainability*, 12(14), 5528.
- Liang, H., Wang, M.-M., Wang, J.-J., & Xue, Y. (2018). How intrinsic motivation and extrinsic incentives affect task effort in crowdsourcing contests: A mediated moderation model. *Computers in Human behavior*, 81, 168-176.
- Lin, P. M., Au, W. C., Leung, V. T., & Peng, K.-L. (2020). Exploring the meaning of work within the sharing economy: A case of food-delivery workers. *International Journal of Hospitality Management*, 91, 102686.
- Lin, X., Chien, S.-W., Hung, C.-W., Chen, S.-C., & Ruangkanjanases, A. (2021). The Impact of Switching Intention of Telelearning in COVID-19 Epidemic's Era: The Perspective of Push-Pull-Mooring Theory. Frontiers in Psychology, 12, 639589.
- Liñán, F., & Chen, Y. W. (2009). Development and cross–cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship theory and practice*, *33*(3), 593-617.

- Loehlin, J. C., McCrae, R. R., Costa Jr, P. T., & John, O. P. (1998). Heritabilities of common and measure-specific components of the Big Five personality factors. *Journal of research in personality*, *32*(4), 431-453.
- Loganathan, M. (2021). Assessing social sustainability in the gig economy.
- Lohmöller, J.-B. (2013). Latent variable path modeling with partial least squares. Springer Science & Business Media.
- Ma, X., Khansa, L., & Kim, S. S. (2018). Active community participation and crowdworking turnover: A longitudinal model and empirical test of three mechanisms. *Journal of Management Information Systems*, 35(4), 1154-1187.
- MacDonald, R., & Giazitzoglu, A. (2019). Youth, enterprise and precarity: or, what is, and what is wrong with, the 'gig economy'? *Journal of Sociology*, 55(4), 724-740.
- Mahmod, M., & Hassan, H. (2020). Spatial crowdsourcing: Opportunities and challenges in motivating Malaysian women's participation in gig economy. 2020 IEEE Conference on e-Learning, e-Management and e-Services (IC3e).
- Malhotra, A. (2020). Making the one-sided gig economy really two-sided: Implications for future of work. In *Handbook of digital innovation* (pp. 228-249). Edward Elgar Publishing.
- Mamman, M., Ogunbado, A. F., & Abu-Bakr, A. S. (2016). Factors influencing customer's behavioral intention to adopt Islamic banking in Northern Nigeria: a proposed framework. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 7(1), 51-55.
- Manley, S. C., Hair, J. F., Williams, R. I., & McDowell, W. C. (2021). Essential new PLS-SEM analysis methods for your entrepreneurship analytical toolbox. *International Entrepreneurship and Management Journal*, 17(4), 1805-1825.
- Manyika, J., Lund, S., Bughin, J., Robinson, K., Mischke, J., & Mahajan, D. (2016a). Independent-Work-Choice-necessity-and-the-gig-economy.
- Manyika, J., Lund, S., Bughin, J., Robinson, K., Mischke, J., & Mahajan, D. (2016b). Independent Work: Choice. *Necessity, and the Gig Economy*.
- Marrone, M., & Finotto, V. (2019). Challenging Goliath. Informal unionism and digital platforms in the food delivery sector. The case of riders union Bologna. *Partecipazione e conflitto*, *12*(3), 691-716.
- Mas, A., & Pallais, A. (2020). Alternative work arrangements.
- Matthews, L., Hair, J., & Matthews, R. (2018). PLS-SEM: THE HOLY GRAIL FOR ADVANCED ANALYSIS. *Marketing Management Journal*, 28(1).
- 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.
- MDM, M. J., Herrera-Peco, I., Pérez-Fuentes, M. D. C., & JJ, G. L. (2020). Analysis of the threat perceived by the COVID-19 in the Spanish population. *Atencion primaria*, 52(7), 515-516.
- Meijerink, J., & Keegan, A. (2019). Conceptualizing human resource management in the gig economy: Toward a platform ecosystem perspective. *Journal of Managerial Psychology*.
- Menhat, M., Zaideen, I. M. M., Yusuf, Y., Salleh, N. H. M., Zamri, M. A., & Jeevan, J. (2021). The impact of Covid-19 pandemic: A review on maritime sectors in Malaysia. *Ocean & Coastal Management*, 209, 105638.
- Milland, K. (2017). Slave to the keyboard: the broken promises of the gig economy. In: SAGE Publications Sage UK: London, England.
- Mladenow, A., Bauer, C., & Strauss, C. (2015). Crowdsourcing in logistics: concepts and applications using the social crowd. Proceedings of the 17th International Conference on Information Integration and Web-based Applications & Services.
- Mohamed, R. N., Rusli, M. S., & Borhan, H. (2021). Modelling the effectiveness of using online food delivery services apps among customers in Klang valley during Covid-19 pendamics/Prof Madya. Dr Rozita Naina Mohamed.
- Montgomery, T., & Baglioni, S. (2020). Defining the gig economy: platform capitalism and the reinvention of precarious work. *International Journal of Sociology and Social Policy*.
- Moon, B. (1995). Paradigms in migration research: exploring' moorings' as a schema. *Progress in human geography*, 19(4), 504-524.
- Mukhopadhyay, B. R., & Chatwin, C. R. (2020). The significance of Herzberg and taylor for the gig economy of China: Evaluating gigger incentives for Meituan and Ele. Me. *International Journal of Applied Behavioral Economics (IJABE)*, 9(4), 1-17.
- Munir, M., Jajja, M. S. S., Chatha, K. A., & Farooq, S. (2020). Supply chain risk management and operational performance: The enabling role of supply chain integration. *International Journal of Production Economics*, 227, 107667.
- Muntaner, C. (2018). Digital platforms, gig economy, precarious employment, and the invisible hand of social class. *International Journal of Health Services*, 48(4), 597-600.
- Mustafa, W. M. W., & Islam, M. A. (2021). Financial retirement planning among self employed workers in Malaysia: A conceptual investigation. AIP Conference Proceedings.
- Nagelkerke, N. J. (1991). A note on a general definition of the coefficient of determination. *Biometrika*, 78(3), 691-692.

- Najmi, A. (2017). Understanding the impact of service convenience on customer satisfaction in home delivery: Evidence from Pakistan. *International Journal of Electronic Customer Relationship Management*, 7-11.
- Nakagawa, S., & Schielzeth, H. (2013). A general and simple method for obtaining R2 from generalized linear mixed-effects models. *Methods in ecology and evolution*, 4(2), 133-142.
- Nayan, N. M., & Hassan, M. (2020). Customer satisfaction evaluation for online food service delivery system in Malaysia. *J. Inf. Syst. Technol. Manag*, 5(9), 123-136.
- Nazruzila Razniza, M. N., & Kamal Halili, H. (2020). Covid-19 Outbreak: Opportunity or Risk for Gig Economy Workers. *INTI JOURNAL*, 2020(57).
- Nga, J. L., Ramlan, W. K., & Naim, S. (2021). Covid-19 pandemic and unemployment in Malaysia: a case study from Sabah. Cosmopolitan Civil Societies: An Interdisciplinary Journal, 13(2), 73-90.
- Nitzl, C. (2016). The use of partial least squares structural equation modelling (PLS-SEM) in management accounting research: Directions for future theory development. *Journal of Accounting Literature*.
- Niu, B., Li, Q., Mu, Z., Chen, L., & Ji, P. (2021). Platform logistics or self-logistics? Restaurants' cooperation with online food-delivery platform considering profitability and sustainability. *International Journal of Production Economics*, 234, 108064.
- Nor, M. N. M., Sabri, S. M., & Isa, N. F. M. (2021). E-Hailing Service Satisfaction: A Case Study of Students in a Higher Education Institution in Perlis, Malaysia. *Jurnal Intelek*, 16(2), 138-150.
- Nungsari, M., & Chuah, H. Y. (2021). Participation in the sharing economy for refugees in Malaysia: A solution that bypasses legal constraints? In *Sharing Economy at the Base of the Pyramid* (pp. 127-147). Springer.
- Nunnally, J. C. (1978). An overview of psychological measurement. *Clinical diagnosis* of mental disorders, 97-146.
- Onyango, J. O. (2022). Critical Success Factors for the Future of Work in Gig Economy: Determinants for Gig Entrepreneurs. In *Sustainability in the Gig Economy* (pp. 33-48). Springer.
- Ooi, B.-C., & Nazar, S. A. (2021). Exploring factors influencing e-hailing services in Klang Valley, Malaysia. *International Journal of Business and Economy*, 3(1), 32-46.
- Oppegaard, S. M. N. (2020). Regulating flexibility: Uber's platform as a technological work arrangement. *Nordic Journal of Working Life Studies*, 11(1).
- Ortiz-Prado, E., Henriquez-Trujillo, A. R., Rivera-Olivero, I. A., Lozada, T., & Garcia-Bereguiain, M. A. (2021). High prevalence of SARS-CoV-2 infection among

- food delivery riders. A case study from Quito, Ecuador. *Science of The Total Environment*, 770, 145225.
- Pandey, N., & Pal, A. (2020). Impact of digital surge during Covid-19 pandemic: A viewpoint on research and practice. *International journal of information management*, 55, 102171.
- Pangrazio, L., Bishop, C., & Lee, F. (2021). Old Media, New Gigs: The Discursive Construction of the Gig Economy in Australian News Media. *Work, Employment and Society*, 09500170211034663.
- Papakostopoulos, V., & Nathanael, D. (2021). The complex interrelationship of work-related factors underlying risky driving behavior of food delivery riders in Athens, Greece. *Safety and health at work*, *12*(2), 147-153.
- Patel, H., & Joseph, J. (2016). Questionnaire designing process: A review. *Journal of Clinical Trials*, 6(2), 2-7.
- Paul. (2019). The gig-economy and the impact on the millenial generation. *LUBS3345*. <a href="http://resources.library.leeds.ac.uk/final-chapter/dissertations/lubs/3345example1.pdf">http://resources.library.leeds.ac.uk/final-chapter/dissertations/lubs/3345example1.pdf</a>
- Perumal, I., Rajamohan Parthasarathy, M., Ayyappan, P., Jayabalan, M. N., Nair, S., & Selladurai, S. (2021). The Effects towards Quality of Online Food Delivery Services during COVID-19 Pandemic in Malaysia. *Science International*, 33(6), 429-435.
- Peter, J. P., & Churchill Jr, G. A. (1986). Relationships among research design choices and psychometric properties of rating scales: A meta-analysis. *Journal of marketing research*, 23(1), 1-10.
- Petriglieri, G., Ashford, S., & Wrzesniewski, A. (2018). Thriving in the gig economy. *HBR'S 10 MUST*, 109.
- Pitchay, A. A., Ganesan, Y., Zulkifli, N. S., & Khaliq, A. (2021). Determinants of customers' intention to use online food delivery application through smartphone in Malaysia. *British Food Journal*.
- Poggenpoel, M., & Myburgh, C. (2003). The researcher as research instrument in educational research: A possible threat to trustworthiness?(A: research\_instrument). *Education*, 124(2), 418-423.
- Polzer, J. T., Gulati, R., Khurana, R., & Tushman, M. L. (2009). Crossing boundaries to increase relevance in organizational research. *Journal of Management Inquiry*, 18(4), 280-286.
- Popan, C., & Anaya-Boig, E. (2021). The intersectional precarity of platform cycle delivery workers.
- Puram, P., Gurumurthy, A., Narmetta, M., & Mor, R. S. (2021). Last-mile challenges in on-demand food delivery during COVID-19: understanding the riders' perspective using a grounded theory approach. *The International Journal of*

- Logistics Management.
- Rachmawati, R., ZAKIA, L., SAFITRI, S., & LUPITA, A. (2022). The Impact of Self-Efficacy and Job Crafting on Job Satisfaction of Gig Workers: An Empirical Study from Indonesia. *The Journal of Asian Finance, Economics and Business*, 9(3), 159-169.
- 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.
- Rahim, N. M., & Yunus, N. F. A. M. (2021). Consumers satisfaction towards e-Hailing food delivery services during Movement Control Order period: A case study in Selangor. *Journal of Science and Mathematics Letters*, 9, 1-9.
- Rahman, A. A., Jasmin, A. F., & Schmillen, A. (2020). The vulnerability of jobs to Covid-19: The case of Malaysia.
- Ramayah, T., Cheah, J., Chuah, F., Ting, H., & Memon, M. A. (2018). Partial least squares structural equation modeling (PLS-SEM) using smartPLS 3.0. An updated guide and practical guide to statistical analysis.
- Raosoft, I. (2004). Sample size calculator. Available from: www raosoft com/samplesize.
- Ravenelle, A. J. (2019). "We're not uber:" control, autonomy, and entrepreneurship in the gig economy. *Journal of Managerial Psychology*.
- Ravenstein, E. G. (1885). The laws of migration. *Journal of the statistical society of London*, 48(2), 167-235.
- Reeve, J., Jang, H., Carrell, D., Jeon, S., & Barch, J. (2004). Enhancing students' engagement by increasing teachers' autonomy support. *Motivation and emotion*, 28(2), 147-169.
- Reynolds, N., Diamantopoulos, A., & Schlegelmilch, B. (1993). Pre-testing in questionnaire design: A review of the literature and suggestions for further research. *Market Research Society. Journal.*, 35(2), 1-11.
- Richter, N. F., Cepeda-Carrion, G., Roldán Salgueiro, J. L., & Ringle, C. M. (2016). European management research using partial least squares structural equation modeling (PLS-SEM). *European Management Journal*, 34 (6), 589-597.
- Ringle, C., Da Silva, D., & Bido, D. (2015). Structural equation modeling with the SmartPLS. *Bido, D., da Silva, D., & Ringle, C.*(2014). Structural Equation Modeling with the Smartpls. Brazilian Journal Of Marketing, 13(2).
- Ringle, C. M., & Sarstedt, M. (2016). Gain more insight from your PLS-SEM results: The importance-performance map analysis. *Industrial management & data systems*.
- Robinson, M. A. (2010). Work sampling: Methodological advances and new applications. *Human factors and ergonomics in manufacturing & service*

- industries, 20(1), 42-60.
- Roesch, F. A., & Moisen, G. G. (2005). 2 The Forest Inventory and Analysis Sampling Frame. The Enhanced Forest Inventory and Analysis Program--national Sampling Design and Estimation Procedures (80), 11.
- Roopa, S., & Rani, M. (2012). Questionnaire designing for a survey. *Journal of Indian Orthodontic Society*, 46(4\_suppl1), 273-277.
- Rosipal, R., & Krämer, N. (2005). Overview and recent advances in partial least squares. International Statistical and Optimization Perspectives Workshop" Subspace, Latent Structure and Feature Selection".
- Rossiter, J. R. (2008). Content validity of measures of abstract constructs in management and organizational research. *British Journal of Management*, 19(4), 380-388.
- Rougès, J.-F., & Montreuil, B. (2014). Crowdsourcing delivery: New interconnected business models to reinvent delivery. 1st international physical internet conference.
- Roy, G., & Shrivastava, A. K. (2020). Future of gig economy: opportunities and challenges. *IMI Konnect*, 9(1), 14-27.
- Salim, N., Chan, W. H., Mansor, S., Bazin, N. E. N., Amaran, S., Faudzi, A. A. M., Zainal, A., Huspi, S. H., Hooi, E. K. J., & Shithil, S. M. (2020). COVID-19 epidemic in Malaysia: Impact of lockdown on infection dynamics. *medrxiv*.
- Salkind, N. J. (2010). Encyclopedia of research design (Vol. 1). Sage.
- Sargeant, M. (2017). The gig economy and the future of work. *Ejournal of International* and Comparative Labour Studies, 6(2), 1-12.
- Sarstedt, M., & Cheah, J.-H. (2019). Partial least squares structural equation modeling using SmartPLS: a software review. In: Springer.
- Sarstedt, M., Ringle, C. M., Henseler, J., & Hair, J. F. (2014). On the emancipation of PLS-SEM: A commentary on Rigdon (2012). *Long range planning*, 47(3), 154-160.
- Satishprakash, S. (2020). Concept of population and sample. Gujarat University.
- ResearchGate. Saunders, M., Lewis, P., & Thornhill, A. (2007). Research methods. Business Students 4th edition Pearson Education Limited, England.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.
- Savenye, W., & Robinson, R. (2004). An introduction for educational technologiests. *J. D., Handbook of research for educational communications and technology*, 1045-1071.
- Schaper, M. T. (2020). Malaysia's Self-Employment Explosion: Why So Many Own-

## Account Workers?

- Scherp, A., Saathoff, C., Franz, T., & Staab, S. (2011). Designing core ontologies. *Applied Ontology*, 6(3), 177-221.
- Schiek, D. (2020). Collective Bargaining and Unpaid Care as Social Security Risk: An EU Perspective. *International Journal of Comparative Labour Law and Industrial Relations*, 36(3).
- Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English language teaching*, *5*(9), 9-16.
- See-Kwong, G., Soo-Ryue, N., Shiun-Yi, W., & Lily, C. (2017). Outsourcing to online food delivery services: Perspective of F&B business owners. *The Journal of Internet Banking and Commerce*, 22(2), 1-18.
- Segura, L. N., Gonzalez, E., Harguindeguy, F. M., Colombo, M. A., & Jauregui, A. (2020). Food delivery rates increased with forest canopy cover and nestling growth improved with arachnids in the Masked Gnatcatcher Polioptila dumicola. *Acta Ornithologica*, 54(2), 233-241.
- Serrano, L., Sianes, A., & Ariza-Montes, A. (2020). Understanding the implementation of Airbnb in urban contexts: Towards a categorization of European cities. *Land*, 9(12), 522.
- Sevilla, S. (2020). The voices of the unheard: the reality behind the working life of Indonesian gig workers in the transport industry University of Twente].
- Shamoo, A. E., & Resnik, D. B. (2009). *Responsible conduct of research*. Oxford University Press.
- Shapiro, A. (2021). Platform urbanism and infrastructural surplus. In *Platform Economy Puzzles* (pp. 101-122). Edward Elgar Publishing.
- Shapiro, S. S., & Wilk, M. B. (1965). An analysis of variance test for normality (complete samples). *Biometrika*, 52(3/4), 591-611.
- Shiau, W.-L., Sarstedt, M., & Hair, J. F. (2019). Internet research using partial least squares structural equation modeling (PLS-SEM). *Internet Research*.
- Shokoohyar, S. (2018). Ride-sharing platforms from drivers' perspective: Evidence from Uber and Lyft drivers. *International Journal of Data and Network Science*, 2(4), 89-98.
- SIN, K.-Y., LO, M.-C., & MOHAMAD, A. A. (2021). The Determinants and Barriers of Outsourcing Third-Party Online Delivery: Perspectives of F&B Entrepreneurs in Malaysia. *The Journal of Asian Finance, Economics and Business*, 8(5), 979-986.
- Smith-Bingham, R., & Hariharan, K. (2020). This is the impact of the Coronavirus on business. *Retrieved online from <a href="https://www.weforum.">https://www.weforum.</a>*

- org/agenda/2020/02/why-is-coronavirus-a-global-business-risk.
- Smith, A. C., Koper, N., Francis, C. M., & Fahrig, L. (2009). Confronting collinearity: comparing methods for disentangling the effects of habitat loss and fragmentation. *Landscape ecology*, 24(10), 1271-1285.
- Smith, B., Williams, J., & Steffen, S.-K. (2003). The ontology of the gene ontology. AMIA Annual Symposium Proceedings.
- Smith, J. L., Harrison, P. R., Kurtz, J. L., & Bryant, F. B. (2014). Nurturing the capacity to savor: Interventions to enhance the enjoyment of positive experiences. *The Wiley Blackwell handbook of positive psychological interventions*, 42-65.
- Sojan, M. (2021). Employee engagement of gig workers and the corporate strategies. *New paradigms in business management practices*, 2, 327-333.
- Soon, J. M., Vanany, I., Wahab, I. R. A., Sani, N. A., Hamdan, R. H., & Jamaludin, M. H. (2022). Protection Motivation Theory and consumers' food safety behaviour in response to COVID-19. *Food Control*, *138*, 109029.
- Srnicek, N. (2017). Platform capitalism. John Wiley & Sons.
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate behavioral research*, 25(2), 173-180.
- 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.
- Stöber, J. (2001). The Social Desirability Scale-17 (SDS-17): Convergent validity, discriminant validity, and relationship with age. *European Journal of Psychological Assessment*, 17(3), 222.
- Stoel, R. D., Wittenboer, G. v. d., & Hox, J. (2004). Methodological issues in the application of the latent growth curve model. In *Recent developments on structural equation models* (pp. 241-261). Springer.
- Streukens, S., Leroi-Werelds, S., & Willems, K. (2017). Dealing with nonlinearity in importance-performance map analysis (IPMA): An integrative framework in a PLS-SEM context. In *Partial least squares path modeling* (pp. 367-403). Springer.
- Sun, P. (2019). Your order, their labor: An exploration of algorithms and laboring on food delivery platforms in China. *Chinese Journal of Communication*, 12(3), 308-323.
- Sun, Y., Liu, D., Chen, S., Wu, X., Shen, X.-L., & Zhang, X. (2017). Understanding users' switching behavior of mobile instant messaging applications: An empirical study from the perspective of push-pull-mooring framework. *Computers in Human behavior*, 75, 727-738.
- Surico, P., & Galeotti, A. (2020). The economics of a pandemic: the case of Covid-19. Wheeler Institute for Business and Development, LBS. London: London

- Business School.
- Taherdoost, H. (2016). Sampling methods in research methodology; how to choose a sampling technique for research. *How to choose a sampling technique for research* (April 10, 2016).
- Tan, S. Y., Lim, S. Y., & Yeo, S. F. (2021). Online food delivery services: cross-sectional study of consumers' attitude in Malaysia during and after the COVID-19 pandemic. *F1000Research*, *10*(972), 972.
- Tassinari, A., & Maccarrone, V. (2020). Riders on the storm: Workplace solidarity among gig economy couriers in Italy and the UK. *Work, Employment and Society*, 34(1), 35-54.
- Tavakoli-Targhi, M. (2000). Going Public: Patriotic and Matriotic Homeland in Iranian Nationalist Discourses. *Strategies: Journal of Theory, Culture & Politics*, 13(2), 175-200.
- Tenenhaus, M., Vinzi, V. E., Chatelin, Y.-M., & Lauro, C. (2005). PLS path modeling. *Computational statistics & data analysis*, 48(1), 159-205.
- Todolí-Signes, A. (2018). Judgment designating Deliveroo 'rider'an employee and analysis of its impact on the 'gig economy'. In: SAGE Publications Sage UK: London, England.
- 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.
- Troise, C., O'Driscoll, A., Tani, M., & Prisco, A. (2020). Online food delivery services and behavioural intention—a test of an integrated TAM and TPB framework. British Food Journal.
- Truss, C., Shantz, A., Soane, E., Alfes, K., & Delbridge, R. (2013). Employee engagement, organisational performance and individual well-being: exploring the evidence, developing the theory. In (Vol. 24, pp. 2657-2669): Taylor & Francis.
- Tumin, S. A. (2020). How common is working from home. *Khazanah Research Institute* (*Issue April*). www. *KRInstitute. org*.
- Uchiyama, Y., Furuoka, F., Akhir, M. N. M., Li, J., Lim, B., & Pazim, K. H. (2022). Labour Union's Challenges for Improving for Gig Work Conditions on Food Delivery in Japan: A Lesson for Malaysia. *WILAYAH: The International Journal of East Asian Studies*, 11(1), 83-111.
- Usakli, A., & Kucukergin, K. G. (2018). Using partial least squares structural equation modeling in hospitality and tourism: Do researchers follow practical guidelines? *International Journal of Contemporary Hospitality Management*.
- Valente, E., Patrus, R., & Guimarães, R. C. (2019). Sharing economy: Becoming an Uber driver in a developing country. *Revista de Gestão*.

- Vallas, S., & Schor, J. B. (2020). What do platforms do? Understanding the gig economy. *Annual Review of Sociology*, 46(1), 273-294.
- Van Doorn, N., Ferrari, F., & Graham, M. (2020). Migration and migrant labour in the gig economy: an intervention. *Available at SSRN 3622589*.
- Van Hear, N., Bakewell, O., & Long, K. (2018). Push-pull plus: reconsidering the drivers of migration. *Journal of ethnic and migration studies*, 44(6), 927-944.
- Vandaele, K. (2022). Vulnerable food delivery platforms under pressure: protesting couriers seeking "algorithmic justice" and alternatives. Forthcoming in Routledge Handbook of the Gig Economy, edited by I. Ness, New York, Routledge.
- Veen, A., Barratt, T., & Goods, C. (2020). Platform-capital's 'app-etite' for control: A labour process analysis of food-delivery work in Australia. *Work, Employment and Society*, 34(3), 388-406.
- Wang, Q., Miao, F., Wu, J., Niu, Y., Wang, C., & Lownes, N. E. (2019). Dynamic Pricing for autonomous vehicle e-hailing services reliability and performance improvement. 2019 IEEE 15th International Conference on Automation Science and Engineering (CASE).
- Weinreich, P. (2009). 'Enculturation', not 'acculturation': Conceptualising and assessing identity processes in migrant communities. *International Journal of Intercultural Relations*, 33(2), 124-139.
- Westbrook, L. (2021). What Caused Hong Kong's Foodpanda Riders to Go on Strike?

  Long Waiting Times, Pay Cuts and Order System Among Grievances.

  https://www.scmp.com/news/hong-kong/transport/article/3156153/what-caused-hong-kongs-foodpanda-riders-go-strike-long?module=perpetual scroll 0&pgtype=article&campaign=3156153
- Westland, J. C. (2015). Structural equation models. *Stud. Syst. Decis. Control*, 22(5), 152.
- Wilson, E. J., Bunn, M. D., & Savage, G. T. (2010). Anatomy of a social partnership: A stakeholder perspective. *Industrial Marketing Management*, *39*(1), 76-90.
- Win, T. K., & Mohamad, S. F. (2022). Advantages And Challenges of The Gig Economy: Perspective from Potential Hospitality Employees.
- Wisniewski, S. R., Leon, A. C., Otto, M. W., & Trivedi, M. H. (2006). Prevention of missing data in clinical research studies. *Biological psychiatry*, *59*(11), 997-1000.
- Wong, K. K.-K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32.
- 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.

- Woodcock, J., & Graham, M. (2019). The gig economy. A critical introduction. Cambridge: Polity.
- Wright, S. (1923). The theory of path coefficients a reply to Niles's criticism. *Genetics*, 8(3), 239.
- Xue, G., Wang, Z., & Wang, G. (2021). Optimization of rider scheduling for a food delivery service in o2o business. *Journal of Advanced Transportation*, 2021.
- Ye, H. J., & Kankanhalli, A. (2017). Solvers' participation in crowdsourcing platforms: Examining the impacts of trust, and benefit and cost factors. *The Journal of Strategic Information Systems*, 26(2), 101-117.
- Yeo, V. C. S., Goh, S.-K., & Rezaei, S. (2017). Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. *Journal of Retailing and Consumer services*, 35, 150-162.
- Yousafzai, S. Y. (2012). A literature review of theoretical models of Internet banking adoption at the individual level. *Journal of Financial Services Marketing*, 17(3), 215-226.
- Yusof, N. H. M., Ab Halim, N. S., & Mohi, Z. (2021). User experiences using e-Hailing food delivery service in Klang Valley.
- Zancheti, S. M., & Hidaka, L. T. F. (2012). Measuring urban heritage conservation: indicator, weights and instruments (part 2). *Journal of cultural heritage management and sustainable development*.
- Zeng, N., Liu, Y., Gong, P., Hertogh, M., & König, M. (2021). Do right PLS and do PLS right: A critical review of the application of PLS-SEM in construction management research. *Frontiers of Engineering Management*, 8(3), 356-369.
- Zhang, D. (2017). A coefficient of determination for generalized linear models. *The American Statistician*, 71(4), 310-316.
- Zhang, K. (2018). Theory of planned behavior: Origins, development and future direction. *International Journal of Humanities and Social Science Invention*, 7(5), 76-83.
- Zhang, L., Zhu, J., & Liu, Q. (2012). A meta-analysis of mobile commerce adoption and the moderating effect of culture. *Computers in Human behavior*, 28(5), 1902-1911.
- Zhao, X., Lin, W., Cen, S., Zhu, H., Duan, M., Li, W., & Zhu, S. (2021). The online-to-offline (O2O) food delivery industry and its recent development in China. *European Journal of Clinical Nutrition*, 75(2), 232-237.