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Research article

Exploring the heterogeneity of stock market responses to Uber announcements: A comparative analysis of developed and emerging economies in Asia Pacific

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Abstract: I investigated Uber's strategic announcements' impact on stock markets within the Asia Pacific region, distinguishing developed and emerging economies. Utilizing Crunchbase.com data, I applied the "Index Impact Test" and "Stock Response Test" to analyze market responses. I found that in developed economies, stock indices experienced a negative trend before announcements and a positive trend thereafter. In contrast, emerging economies exhibited a positive response exclusively after announcements. I also explored the performance of Uber's stock, demonstrating positive post-announcement effects in both economy types, with emerging economies showing sustained positivity. Further, I expanded to assess Uber's influence on other peer-to-peer (P2P) companies, specifically Lyft and Airbnb, offering insights into the broader implications of Uber's announcements across the P2P sector. The findings suggested that Lyft received a positive market response in developed and emerging economies, while Airbnb's response in developed economies tended to be negative post-announcement.

1. Introduction

The contemporary economic landscape of the Asia Pacific region, noted for its vibrant diversity and rapid technological adoption, is at the cusp of a significant transformation towards a more interconnected and digitally-driven economy. This shift is predominantly characterized by the rise of the sharing economy, a paradigm that leverages digital platforms to facilitate peer-to-peer (P2P) exchanges of goods and services, effectively bypassing traditional intermediaries (Kuhzady et al., 2022). Platforms such as Uber and Airbnb, at the forefront of this movement, have not only transformed consumer behaviors but have also instigated profound economic and social changes, as outlined by Dolnicar (2021). These entities exemplify the disruptive potential of the P2P economy to challenge and redefine established market norms, thus opening new avenues and posing fresh challenges for economic analysis. Within this evolving framework, Uber, in particular, stands out as a paragon of the dynamic interplay between technological innovation and economic activity in the gig economy. Since its launch in 2009, Uber has rapidly expanded its global footprint, becoming emblematic of the ride-sharing model that underpins the burgeoning P2P economy. Its trajectory within the Asia Pacific region, which mirrors the global diversity of economic development with both advanced and quickly growing markets, provides a unique perspective to study the varied effects of such innovative platforms. In developed economies, Uber has precipitated shifts in traditional transportation sectors, igniting debates over labor laws, regulatory responses, and the reconfiguration of urban mobility frameworks (Valdez, 2023). Conversely, in emerging economies, Uber's foray has fostered discourse around technological adoption, financial inclusion, and the formalization of the informal economy, reflecting its broad economic imprint (Hasan et al., 2021).

Furthermore, the scope of the P2P economy transcends the realms of transportation and accommodation, penetrating sectors as varied as finance, retail, and energy. This broad application marks a paradigm shift towards decentralization, empowering individuals to assume roles traditionally occupied by established corporations and financial institutions. For example, P2P lending platforms are revolutionizing the finance sector by facilitating direct loans between peers, thereby democratizing access to capital in unprecedented ways (Gao et al. 2021). In the retail domain, P2P marketplaces are promoting sustainable consumption by enabling direct buying and selling among individuals, encouraging the reuse and recycling of goods (Plouffe, 2008). Similarly, the energy sector is undergoing a transformation with the advent of P2P energy trading, allowing consumers to engage as both producers and consumers of energy within localized networks (Huang et al., 2022). This expansion of the P2P economy underscores a significant shift towards community-based models and digital networks, heralding a redefinition of value creation and exchange in the contemporary era.

In this context, the role of platforms like Uber transcends mere transportation services, signaling a broader movement towards challenging and reimagining conventional economic and business structures. Their influence is a testament to the transformative power of the P2P economy, advocating for a more inclusive, efficient, and adaptable economic system. It is within this intricate tapestry of technological advancement and economic transformation that I seek to explore the disruptive potential of Uber in the stock markets of developed and emerging economies in the Asia Pacific region, providing valuable insights for both capital market participants and policymakers. Employing a methodological framework, encompassing comparative analysis, parametric and non-parametric tests,

as well as robustness testing, the research contributes significantly to the existing literature. A notable contribution of this study lies in its exhaustive set of statistical tests, encompassing four parametric and non-parametric tests, along with two robustness tests. This surpasses the traditional scope of statistical tests applied in prior research adopting an event research approach within the Uber domain. The study also examines the intricate interaction between developed and emerging economies, providing a nuanced understanding of Uber's impact across diverse economic contexts. Furthermore, the research utilizes a substantial data sample of Uber announcements in the Asia Pacific region, allowing for segmentation based on the development index of respective countries.

My findings reveal a nuanced pattern of impact associated with Uber announcements on the financial markets of developed and emerging economies in the Asia Pacific region. In developed economies, Uber announcements exhibit a negative impact in the pre-announcement period, followed by a positive impact in the post-announcement period. Conversely, in emerging economies, the impact on stock markets occurs solely in the period after the announcement, and it is positive. The analysis of Uber share impact further delineates a positive pattern in both economies, with impacts occurring after the announcement in developed economies and both before and after in emerging economies. The characterization of announcements on Asia Pacific indices and Uber share indicates positive tendencies towards safety-focused technological innovations and optimistic market forecasts. In developed economies, responses are influenced by regulatory stability, strategic vision, and perceived market advantages. In contrast, emerging economies prioritize safety measures, technological progress, and positive market outlook, resulting in positive abnormal returns. Negative reactions are consistent in both contexts when announcements involve security breaches, uncertainty about strategic direction, and potential overconfidence. Additionally, I extended to examine the influence of Uber's strategic announcements on Lyft and Airbnb, illustrating a positive market response for Lyft across both developed and emerging economies. This response is indicative of a potential synergistic or anticipatory market sentiment within the P2P sector. Conversely, Airbnb's stock performance in developed economies experiences a predominantly negative impact post-announcement, highlighting the diverse effects of Uber's announcements across the P2P economy.

2. Literature review

2.1. Peer-to-Peer economy in the Asia Pacific region

The emergence of the peer-to-peer (P2P) economy has catalyzed transformative changes across the diverse and economically dynamic Asia Pacific region, encompassing both developed and emerging markets. Within this economic landscape, P2P platforms act as agents of change with profound implications for growth, financial inclusion, and the restructuring of traditional business models. Studies examining the economic impact of P2P platforms, particularly in finance and commerce, reveal a redefined landscape where collaboration and resource allocation take precedence (Quattrone et al., 2022). In the transportation sector, P2P travel services exemplified by companies like Uber and Lyft, among tourists, contributes to an augmentation in the overall utilization of public transportation (Tan et al., 2022). These services not only benefit tourists but also offer advantages to local residents, including shorter waiting times, lower rates, and an overall enhanced travel experience

(Conway et al., 2018; Hall et al., 2018). Additionally, this service model extends benefits to affiliated drivers by providing them with flexible and financially rewarding employment opportunities (Cohen and Kietzmann, 2014).

Within the realm of travel and tourism, Airbnb, according to Kim (2019) and Kiatkawsin et al. (2020), has significantly contributed to the promotion of tourism in the Asia Pacific region. By creating job opportunities for local communities, especially in rural areas with limited traditional employment opportunities, Airbnb has become a transformative force. However, this positive impact is not without challenges, where some traditional accommodation providers experience decreased revenue due to competitive pricing (Koh and King, 2017; Munasinghe et al., 2022; Tumbali, 2020).

In the lending sector, studies in China have developed prediction models for online P2P lending based on risk preference behavior and credit choice (Liu and Xia, 2017). Oh and Rosenkranz (2022) expanded the scope globally, examining the P2P lending market in 62 economies and identifying factors such as the efficiency of financial institutions, financial literacy, and limited access to formal financial services that positively associate with the expansion of P2P lending.

The P2P economy has diversified its reach into various sectors, including fashion (Choi and He, 2019), the energy industry (Roy et al., 2016; Song et al., 2021), and electricity (Schneiders et al., 2022). This diversification underscores the adaptability and versatility of P2P models across different industries. Beyond economic considerations, the P2P economy has permeated the social and cultural fabric of Asia Pacific societies, as highlighted by Ki and Lee (2019). This societal impact is multifaceted, influencing community dynamics, trust formation, and the cultivation of social capital in response to P2P interactions. Technological innovation is inseparable from the P2P economy. Scholars examine how P2P models drive digital transformation, fostering innovation and influencing the rapid adoption of cutting-edge technologies across diverse sectors in the Asia Pacific (Junarsin et al., 2023; Kartika, 2023).

However, the P2P economy has not been without its challenges, particularly on the regulatory front. Notable companies like Uber and Airbnb, facing opposition from traditional sectors, have encountered regulatory measures ranging from bans to licensing and taxation, as observed by Munasinghe et al. (2022) and Rauch and Schleicher (2015). Cities and countries have imposed restrictions on ride-sharing services, and governments have implemented regulations to address concerns about short-term rentals and ensure compliance with local laws (Vinogradov et al., 2020).

2.2. Economic heterogeneity and P2P platform acceptance: Developed vs. emerging economies

The concept of economic heterogeneity encompasses the diverse and complex nature of economic environments across regions, impacting financial market responses to innovations and regulatory changes. This section explores the contrasting dynamics between developed and emerging economies, exploring how regulatory, cultural, and political factors uniquely influence P2P platform adoption within these distinct economic contexts.

2.2.1.   Economic heterogeneity and its influence on financial markets

Economic heterogeneity encapsulates the diverse spectrum of economic conditions, regulatory frameworks, and market structures prevalent across distinct geographical regions. This variance

influences the global market's fabric, wherein the effects of specific events are significantly modulated by underlying economic disparities. As elucidated by Borio (2014), financial cycles manifest distinct characteristics across various economies. Such disparities are primarily attributable to the differential stages of economic development, regulatory practices, and susceptibility to external shocks (Li et al., 2019). The dichotomy between developed and emerging economies is particularly pronounced in this context. Developed economies typically boast stable regulatory frameworks, sophisticated technological infrastructure, and well-established financial markets (Comin and Nanda, 2019; Rudny, 2018). Conversely, emerging economies are often marked by more unpredictable regulatory environments, burgeoning technological advancements, and swiftly evolving financial markets (Celik et al., 2024).

2.2.2. The role of regulatory stability in economic diversity

Regulatory stability constitutes a fundamental element influencing economic diversity. It delineates the operational terrain for novel technologies and platforms, serving as an essential factor in bolstering investor confidence and ensuring market equilibrium (Deller and Watson, 2016). In developed economies, well-established regulatory frameworks create an environment conducive to the growth of peer-to-peer (P2P) platforms. Such environments facilitate innovation while safeguarding consumer interests. Nevertheless, the inherent stability of these regulatory frameworks often entails stringent requirements, presenting potential barriers to entry for newcomers such as Uber (Edelman and Geradin, 2015).

In contrast, the dynamic regulatory landscapes of emerging economies can provide fertile ground for the expansion of P2P platforms, offering avenues for growth. Yet, this dynamism brings with it a degree of regulatory unpredictability and heightened market fluctuations, posing considerable challenges (Vollans, 2004). The ability of these economies to strike a balance between fostering innovation and maintaining regulatory oversight is pivotal. It profoundly affects the reception and ultimate success of P2P business models within their markets.

2.2.3. Cultural openness and consumer behavior across economies

The cultural response to technological innovations and new business models, such as Uber, showcases a marked dichotomy between developed and emerging economies. In developed economies, the reception is dual-natured: there's a pronounced enthusiasm for innovation, underpinned by a culture that prizes technological advancement and the conveniences it heralds (Lopes and Teixeira, 2009). Yet, this enthusiasm is tempered by skepticism concerning potential disruptions to established industries, employment ramifications, and privacy concerns. The consumer behavior in these markets is mature, characterized by rapid yet discerning adoption influenced by considerations of sustainability, corporate ethics, and data security (Stafford and Duong, 2023). In contrast, emerging economies are typified by a vibrant cultural milieu where rapid urbanization and evolving consumer preferences engender a wholehearted acceptance of peer-to-peer (P2P) platforms (Stafford and Duong, 2023). The drive for economic growth, coupled with an increase in digital literacy among an expanding middle class, lays the groundwork for

embracing such innovations. Here, the allure of new technology often eclipses any reservations, propelled by the prospects of improved accessibility, job creation, and an uplifted quality of life.

2.2.4. The political landscape and its impact on P2P platforms

The attitude of political bodies towards technology and innovation plays a pivotal role in shaping the operational environment for P2P platforms across different economic landscapes. Developed economies are characterized by well-established political and regulatory frameworks aimed at striking a balance between fostering innovation and ensuring public safety, labor rights, and competitive fairness (McDonald, 2010). Political discourse in these areas frequently delves into how new business models can be seamlessly woven into the existing societal and legal fabric, indicative of a cautious yet open approach to technological integration (Doner et al., 2009). Conversely, the political climate in emerging economies spans a broad spectrum of attitudes towards P2P platforms, from fervent endorsement to guarded skepticism. Supportive political stances often emerge as part of broader strategies to stimulate technological engagement as a pathway to economic modernization and diversification (Kwak et al., 2023). However, apprehensions regarding regulatory control, market equilibrium, and the effects on conventional sectors can lead to resistance. Navigating the political terrain in these regions requires adept handling of a complex array of stakeholder interests, with policy-making processes that may adapt fluidly to the pace of technological evolution and social acceptance.

2.2.5. P2P platform acceptance amidst COVID-19: A global perspective

The COVID-19 pandemic has profoundly impacted global operational and economic and financial dynamics, necessitating a shift in how industries are analyzed and understood (Teitler Regev and Tavor, 2024). Grassini (2023) provides a comprehensive overview of the pandemic, emphasizing the need for a reevaluation of statistical methodologies to accurately assess its broad economic and social impacts. In developed economies, the mature financial markets and stable regulatory frameworks were tested by the pandemic's disruptions. These economies faced significant reductions in consumer demand for services, including those offered by P2P platforms like Uber, as well as challenges in supply chain logistics (Zhao et al., 2023). The agility of these markets, characterized by high technological integration and robust digital infrastructures, however, allowed for a relatively swift adaptation to the changing landscape. The implementation of safety protocols and the pivot to delivery services are examples of how P2P platforms managed to navigate through the pandemic-induced obstacles (Gagnon et al., 2023). Emerging economies encountered a different set of challenges and opportunities during the pandemic (Wang, 2023). The rapid urbanization and digitalization trends in these regions created a conducive environment for the accelerated adoption of P2P platforms. However, these same factors also made emerging economies particularly vulnerable to the pandemic's economic shocks. The fluctuating consumer confidence, alongside shifts in consumption patterns, underscored the economic volatility faced by these regions. Despite these challenges, the pandemic also acted as a catalyst for innovation within the P2P sector, propelling platforms to adapt and serve new consumer needs amidst the crisis (Zhang et al., 2021).

2.3. The impact of uber on developed and emerging economies

This section examines the multifaceted impacts of Uber on both developed and emerging economies, focusing on the evolution of the peer-to-peer economy. Drawing on an extensive body of research, this review explores the nuanced differences in labor market structures, transportation infrastructure, regulatory challenges, and economic ramifications across diverse global contexts.

2.3.1. Labor market structures

In developed economies, Uber has emerged as a symbol of the broader transition toward a peer-to-peer economic model. Research by Hall and Krueger (2018) emphasizes Uber's role as a catalyst for the expansion of this model, providing individuals with opportunities to engage in a decentralized system of resource sharing. Katz and Krueger (2019) further contribute by highlighting the transformative impact of Uber on the labor market, illustrating how it has facilitated the rise of flexible work arrangements and the gig economy. Conversely, in emerging economies, the peer-to-peer economy assumes a role that goes beyond flexibility. Surie and Koduganti (2016) delve into the unique challenges and opportunities Uber presents in regions characterized by higher unemployment rates and limited formal employment opportunities. Sundararajan (2017) extends this discussion by exploring the ways in which Uber becomes a substantial source of employment, challenging traditional notions of work and income generation in these contexts.

2.3.2. Transportation infrastructure

The impact of Uber on transportation infrastructure in developed economies has been extensively studied. Cramer and Krueger (2016) and Kim et al. (2018) explore how Uber contributes to reducing private car ownership and optimizing existing transportation systems, with implications for traffic congestion and overall urban mobility. In a complementary study, Basu (2019) examines the transformative role of Uber's peer-to-peer nature in addressing gaps in transportation infrastructure, particularly in emerging economies.

2.3.3. Regulatory challenges

Regulatory challenges surrounding Uber in developed economies are often centered on issues of labor rights, safety standards, and fair competition with traditional taxi services. Edelman and Geradin (2015) offer insights into the legal and regulatory debates that have characterized Uber's presence in developed economies. Tzur (2019) contributes by examining the evolving regulatory landscape and its implications for Uber's operations. In emerging economies, Puche (2019) explores the need for regulatory adaptability to address the unique challenges posed by Uber, and Kim and Suh (2021) delve into the complexities of regulating a peer-to-peer economy in these regions.

2.3.4. Economic ramifications

Economically, Uber's impact in developed economies is scrutinized in terms of its contribution to local economies, consumer spending patterns, and the potential displacement of traditional taxi services. Cramer and Krueger (2016) present a comprehensive analysis of the economic implications of Uber's presence in developed nations. Expanding the scope, Rahman et al. (2021) contribute by exploring the nuanced effects on income distribution, financial inclusion, and overall economic development in emerging economies. Sundararajan (2017) further emphasizes the transformative effect of Uber on emerging economies, highlighting its role in shaping the broader economic landscape.

2.4. Event study analysis

The Event Study Methodology (ESM) initially surfaced in examinations of stock split impacts, notably explored by Ball and Brown (1968) and Fama et al. (1969). Built upon the foundation of the efficient market hypothesis as articulated by Fama (1970), ESM operates on the assumption that stock prices inherently encompass all available information, with any new data swiftly assimilated into these prices. However, subsequent investigations have brought to light anomalies, providing investors with avenues to surpass market expectations through predictive pricing. This divergence from the initial premise of market efficiency has contributed to the widespread acceptance of ESM within both investor circles and academic research.

Over time, the scope of ESM applications has expanded significantly. Beyond its conventional focus on financial markets, ESM has found utility across diverse disciplines. Economic studies, such as those conducted by Palatnik et al. (2019) and Tavor (2023), have harnessed ESM to delve into announcements about the gas discoveries. In the realm of tourism, studies like those by Teitler-Regev and Tavor (2023) have demonstrated the applicability of ESM in understanding the impacts of events on this sector. Similarly, within transportation, the works of Maneenop and Kotcharin (2020) and Gavalas et al. (2022) showcase the versatility of ESM in scrutinizing events' effects on this industry. Turning to the corporate sphere, ESM has become a pivotal tool in analyzing the dynamics of companies like Uber. Comprehensive event studies by Barreto et al. (2021) and Alvarez and Argente (2022) provide insights into how specific events influence Uber's stock performance, contributing to a nuanced understanding of corporate event analysis. Parallel to these diverse applications, the disruptive influence of peer-to-peer (P2P) platform announcements in the financial domain, especially within developed and emerging economies, underscores ESM's critical role in contemporary financial analysis. For instance, Bianco et al. (2022b) shed light on the negative impact of new P2P services, such as Airbnb, on the stock returns of traditional businesses in developed markets, highlighting the disruptive nature of P2P platforms. Conversely, Tavor (2024) captures the nuanced effects of Airbnb's announcements in emerging economies, revealing an initial negative market reaction followed by a positive adjustment. This pattern points to the markets' reassessment of Airbnb's expansion implications, reflecting the layered impacts P2P platforms have across different economic landscapes.

3. Hypotheses and theoretical framework

Drawing from the earlier elucidated empirical evidence, the subsequent hypothesis is posited:

Hypothesis 1 (H1): A statistically significant difference in cumulative abnormal return is anticipated between developed and emerging economies within the Asia Pacific region in the context of Uber announcements.

Rationale for Hypothesis 1:

The dynamic and transformative role of Uber in reshaping transportation, labor markets, and regulatory landscapes, as evidenced in both developed and emerging economies, underpins this hypothesis. In developed economies, the advent of Uber has catalyzed shifts towards more flexible work arrangements (Katz and Krueger, 2019) and contributed to the optimization of transportation systems (Cramer and Krueger, 2016). These shifts have potential implications for stock market responses to Uber announcements, reflecting investors' anticipation of Uber's impact on economic activity and infrastructure development. Conversely, in emerging economies, Uber's presence has been associated with broader socio-economic implications, including employment generation in contexts of limited formal job opportunities (Surie and Koduganti, 2016) and efforts to bridge infrastructure gaps (Basu, 2019). Such differential impacts across economic contexts may influence investor perceptions and, by extension, the stock market's response to Uber's operational and strategic announcements.

The heterogeneity in regulatory responses to Uber, ranging from stringent regulatory measures in developed economies to evolving regulatory frameworks in emerging markets (Edelman and Geradin, 2015; Puche, 2019), further supports the premise of varying market reactions. This regulatory divergence could result in differential impacts on Uber's operational landscape and financial outlook, as perceived by investors. Furthermore, the COVID-19 pandemic has introduced additional layers of complexity to Uber's operational environment, with profound implications on global and regional economies (Grassini, 2023). The pandemic's disparate economic impacts across the Asia Pacific region, including shifts in consumer demand and supply chain logistics, may amplify the differences in stock market responses to Uber announcements between developed and emerging economies.

Drawing on these observations, this hypothesis is grounded in the theoretical framework of event study methodology, which posits that stock markets react to new information (MacKinlay, 1997). Given Uber's significant role in the peer-to-peer (P2P) economy, distinct market reactions in developed and emerging economies of the Asia Pacific are anticipated in response to Uber announcements. This difference is expected to manifest in the nature and timing of market responses, than the intensity of impact, highlighting the complex influence of Uber across varied economic contexts. Supporting this hypothesis, the literature illustrates divergent effects of P2P platform announcements. Bianco et al. (2022b) highlight the disruptive impact of P2P services like Airbnb on traditional business sectors in developed markets, resulting in negative stock returns. Conversely, Tavor (2024) documents the initial negative then positive market adjustments in emerging economies following Airbnb's announcements, which is indicative of market reassessments of P2P expansion implications.

4.   Data and empirical strategy

4.1. Data

This academic inquiry scrutinizes the impact of Uber's announcements, sourced from the crunchbase.com platform, on the financial markets within the Asia Pacific region—encompassing both developed and emerging economies based on Morgan Stanley Capital International (MSCI) country lists. The data spans from May 2019 to November 2023, delineated through a two-stage process. Initially, a collection of 10,306 Uber-related announcements from the crunchbase.com website was executed. Subsequently, aligning with MSCI's Asia Pacific country list, these announcements were categorized into two groups: Developed economies, comprising 247 announcements across Australia, Hong Kong, Japan, New Zealand, and Singapore; and emerging economies, including 548 announcements across China, India, Indonesia, Malaysia, South Korea, Taiwan, and Thailand. This categorization is detailed in Table 1, facilitating a structured analysis of the announcements' distribution across varied economic landscapes within the Asia Pacific region.

Two distinct tests were employed to gauge the impact of Uber announcements on the specified country categories. The first, termed the "Index Impact Test", scrutinizes the influence on stock indices in the Asia Pacific region for both developed and emerging economies. The second, referred to as the "Stock Response Test", scrutinizes the impact on Uber's stock returns. The quantitative assessment leveraged local and global stock returns and indices. Specifically, Uber's stock returns (UBER), FTSE Developed Asia Pacific (FTDAP), and FTSE Emerging Asia Pacific (FTEAP) served as stock indices. Additionally, the SandP 500 market index (SandPX) and the FTSE Asia Pacific (FTAP) global index were included as market indices.

The chosen indices were strategically selected to align with the diverse economic development stages of the scrutinized countries. Each index corresponds to a distinct category of economies, representing both developed and emerging markets. This deliberate selection facilitates an assessment of the impact of Uber announcements across varied economic contexts, offering nuanced insights into their effects on markets at different developmental stages. The inclusion of the FTSE Asia Pacific (FTAP) index provides a global perspective, capturing broader market trends and enabling a meaningful comparison between developed and emerging markets.

Data for the study was sourced from Investing.com, encompassing daily returns over 241 days for each announcement—220 days preceding the announcement and 20 days following it. Given Uber's stock issuance in May 2019, exclusions were made for announcements published between May and October 2019, optimizing the analysis in the Stock Response Test. Consequently, the number of announcements tested for developed economies reduced from 247 to 162, and for emerging economies, it decreased from 548 to 383. This methodological approach provides insights into both the pre-announcement effects of insider information and the sustained impact of disclosed information post-announcement.

Table 1. Analyzing the dissemination and illustration of announcements in the selected dataset.

Developed Economies			Emerging Economies		
Panel A: Spatial distribution of selected economies in the sample					
Country	APAC indices	Uber index		APAC indices	Uber index
Australia	134	103	China	62	25
Hong Kong	14	10	India	462	348
Japan	34	20	Indonesia	8	1
New Zealand	5	5	Malaysia	5	1
Singapore	60	24	South Korea	9	7
All	247	162	Taiwan	1	0
			Thailand	1	1
			All	548	383
Panel B: Illustrative examples in Uber announcement samples					
Date	Event	Description			
Developed Markets					
29/10/2023	134	Australia is Uber's crown jewel after "collections" surge to $9.2b			
30/07/2020	244	Uber to keep its regional headquarters in Singapore			
Emerging Markets					
09/06/2020	319	Uber launches 'Hourly Rentals' in India after a successful US launch			
16/02/2020	542	South Korea to map major cities for safe autonomous driving			

Note: Panel A illustrates the distribution of a sample dataset containing 795 Uber announcements, encompassing diverse announcements from both developed (247) and emerging (548) economies. In Panel B, exemplifications of these announcements are detailed, including date, numerical identifier, and brief summaries.

4.2. Empirical strategy

In this study, a methodological framework rooted in event research, a well-established paradigm in financial literature, was employed to scrutinize the repercussions of Uber's announcements on financial markets across the Asia Pacific region, encompassing both developed and emerging economies. Abnormal returns (AR) and cumulative abnormal returns (CAR) served as analytical instruments to elucidate the response of capital markets to Uber's announcements. A market model was constructed to explicate the interplay between market returns (SandPX and FTAP) and stock returns (FTDAP, FTEAP, and UBER) on the event day denoted as i at time t (R_{it}), presuming normal market conditions (R_{mt}) in the absence of unforeseen events. The market model is delineated as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \xi_{it} \tag{1}$$

where R_{it} symbolizes the daily returns for event i at time t, R_{mt} signifies the daily market index returns for event i at time t, and ξ_{it} represents the residual of stock i at time t, which is independently

and identically distributed. Furthermore, α and β correspond to the intercept and slope, respectively, in the ordinary least squares (OLS) regression analysis. Abnormal returns (AR) for each event are computed by subtracting the actual returns (Rit) from the expected or normal returns, and can be determined using the following calculation:

$$AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt} \tag{2}$$

The cumulative abnormal returns (CAR) were determined through the following calculation:

$$CAR_{i,t_1,t_2} = \sum_{t=t_1}^{t_2} AR_{it} \tag{3}$$

In this investigation, a set of three parametric tests and one non-parametric test were employed to evaluate the statistical significance of abnormal returns and cumulative abnormal returns. The first parametric test, the ordinary t-test (ORDIN) introduced by Brown and Warner (1985), served as a primary analytical tool. A second parametric test, the Standardized Residual Test (PATELL) proposed by Patell (1976), was applied to assess the resilience of abnormal returns and explore cross-sectional correlation. The third parametric test was the Standardized Residual Test (Adj-PATELL), developed by Kolari and Pynnönen (2010). Distinguished from the standard t-test, this examination demonstrates robustness in the face of event-induced volatility, as emphasized by Patell (1976), while accounting for cross-sectional correlation. Additionally, a non-parametric test, specifically the Wilcoxon signed rank test devised by Wilcoxon (1945), was incorporated into the analytical framework.

5. Empirical results

In this section, I delineate the study's results and examine the repercussions of Uber announcements for both developed and emerging economies within the financial markets of the region.

5.1. Descriptive statistics

Table 2 provides an overview of the descriptive statistics for the stock and market indices under consideration in the study. The stock indices include Uber's stock returns (UBER), FTSE Developed Asia Pacific (FTDAP), and FTSE Emerging Asia Pacific (FTEAP), while the market indices encompass the SandP 500 market index (SandPX) and the FTSE Asia Pacific (FTAP) global index. Examining the stock indices, it is observed that Uber's stock returns (UBER) exhibit a mean return of 0.083% with a standard deviation of 3.574%. In comparison, FTSE Developed Asia Pacific (FTDAP) has a lower mean return of 0.013% with a standard deviation of 0.954%, and FTSE Emerging Asia Pacific (FTEAP) has a mean return of 0.016% with a standard deviation of 1.045%. Upon comparison of the two economies, it becomes evident that the financial markets in emerging countries exhibit greater volatility and generate a higher average return than those in developed economies. Finally, attention is directed towards the market indices. SandP 500 (SandPX) and FTSE Asia Pacific (FTAP) display mean returns of 0.047% and 0.013%, respectively, with standard deviations of 1.224% and 0.909%, respectively. Where the SandPX index exhibits

higher volatility with a higher average return. Notably, the SandPX index demonstrates heightened volatility alongside a more elevated average return.

Table 2. Overview of descriptive statistics for indices.

Variables	N	Mean	Std. Dev.	Min.	Median	Max.
Stock indices						
UBER	1136	0.083	3.574	−0.216	0.000	0.383
FTDAP	1893	0.013	0.954	−0.074	0.000	0.098
FTEAP	1800	0.016	1.045	−0.060	0.000	0.064
Market indices						
SandPX	1728	0.047	1.224	−0.120	0.001	0.094
FTAP	1798	0.013	0.909	−0.057	0.001	0.069

Note: The mean and standard deviation in the table are presented as percentages.

5.2. *Evaluating the influence of Uber's announcements on developed and emerging market indices*

Figures 1 and 2 present the dynamics of Cumulative Average Abnormal Returns (CAAR) within a 41-day event window, spanning 20 days before and after the announcement. Figure 1 dissects stock indices in the Asia Pacific region, distinguishing developed and emerging economies, while Figure 2 hones in on Uber stock. Table 3 complements these visualizations by providing insights into cumulative abnormal returns and the results of parametric and non-parametric tests applied to 795 Uber announcements. Panel A of the table illuminates trends in Asia Pacific stock indices, while Panel B scrutinizes the Uber stock. In Table 3, the second column elucidates cumulative abnormal returns (CAR_{t_1,t_2}). Columns 3 through 5 dissect results from parametric tests (ORDIN, PATELL, and A-PATELL), offering nuanced insights into return data. Furthermore, column 6 articulates outcomes from the non-parametric test (WSRT) for additional scrutiny.
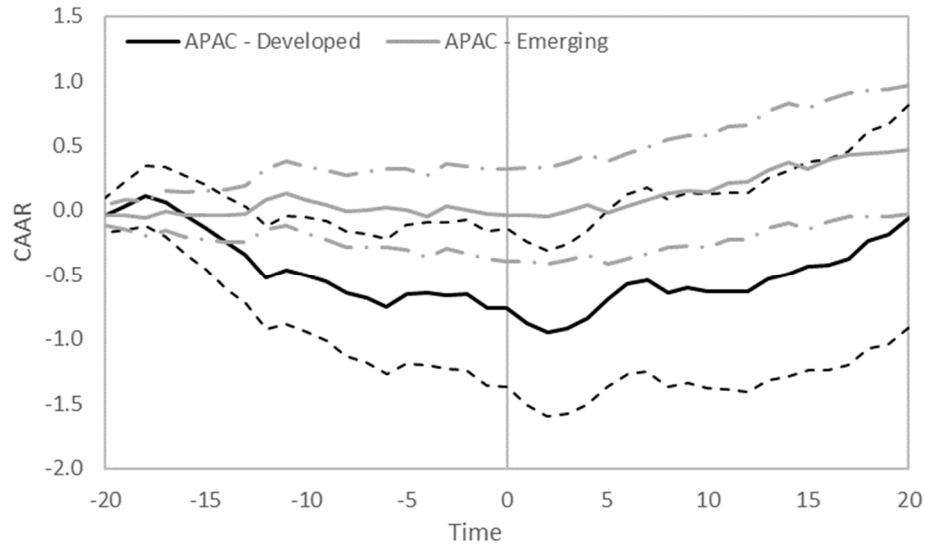
Figure 1. Comparative CAAR analysis: developed vs. emerging economies - APAC stock indices.

Note: Figure 1 illustrates Cumulative Average Abnormal Returns (CAAR) utilizing black lines for developed economies and gray lines for emerging economies over a 41-day event window. The dashed lines represent the 95% confidence intervals.

Figure 2. Comparative CAAR analysis: developed vs. emerging economies – Uber stock index.

Note: Figure 2 illustrates Cumulative Average Abnormal Returns (CAAR) utilizing black lines for developed economies and gray lines for emerging economies over a 41-day event window. The dashed lines represent the 95% confidence intervals.
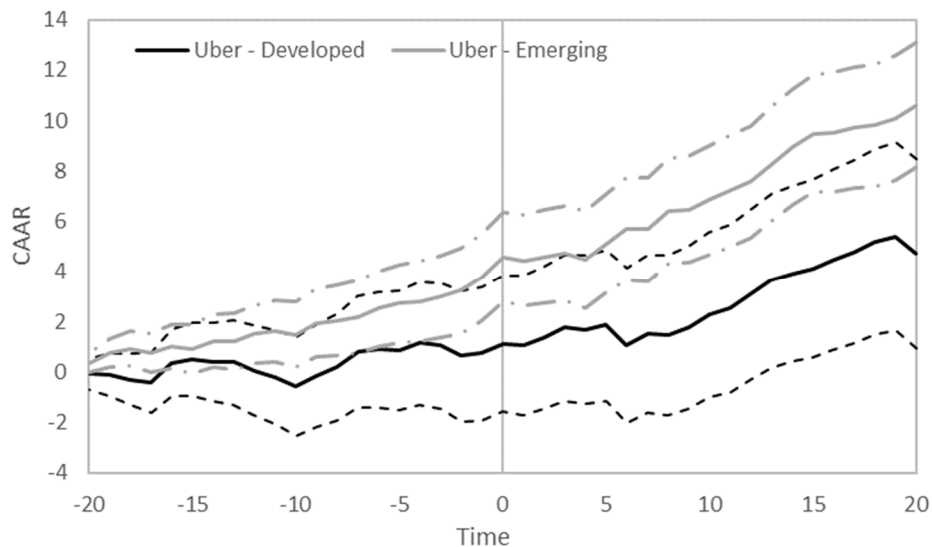
Table 3. An analytical comparison of cumulative abnormal returns in the Asia Pacific region: Developed vs. emerging economies.

Panel A: APAC indices										
	Developed Economies					Emerging Economies				
		Parametric tests			Non-parametric test		Parametric tests			Non-parametric test
Daily time	CAR(%)	ORDIN	PATELL	A-PATELL	WSRT	CAR(%)	ORDIN	PATELL	A-PATELL	WSRT
Pre-event window										
CAR[−20,−1]	−0.761	−2.479**	−3.327***	−2.818***	−1.725*	−0.026	−0.146	1.061	0.856	−1.163
CAR[−15,−1]	−0.728	−2.736***	−3.805***	−3.222***	−2.464**	0.008	0.053	1.037	0.836	−0.735
CAR[−10,−1]	−0.299	−1.376	−2.252**	−1.908*	−0.270	−0.158	−1.266	−0.103	−0.083	−2.120
CAR[−5,−1]	−0.016	−0.107	−0.222	−0.188	0.060	−0.045	−0.510	0.165	0.133	−0.304
Post-event window										
CAR[0,+5]	0.074	0.443	−0.012	−0.010	1.725*	0.013	0.131	0.323	0.261	0.024
CAR[0,+10]	0.135	0.592	0.040	0.034	2.656***	0.170	1.295	1.273	1.026	1.125
CAR[0,+15]	0.328	1.193	0.726	0.615	2.325**	0.345	2.183**	3.177***	2.562***	1.945**
CAR[0,+20]	0.709	2.252**	1.862*	1.577	3.380***	0.492	2.720***	3.936***	3.174***	2.708***
Panel B: Uber index										
	Developed Economies					Emerging Economies				
		Parametric tests			Non-parametric test		Parametric tests			Non-parametric test
Daily time	CAR(%)	ORDIN	PATELL	A-PATELL	WSRT	CAR(%)	ORDIN	PATELL	A-PATELL	WSRT
Pre-event window										
CAR[−20,−1]	0.747	0.554	0.483	0.374	1.096	3.765	4.249***	5.340***	3.996***	4.838***
CAR[−15,−1]	0.397	0.340	0.038	0.029	0.641	2.734	3.563***	4.329***	3.239***	3.743***
CAR[−10,−1]	0.969	1.015	0.948	0.734	0.693	2.150	3.432***	4.418***	3.306***	3.413***
CAR[−5,−1]	−0.149	−0.221	−0.726	−0.562	0.650	1.242	2.803***	3.753***	2.809***	2.202***

Continued on next page

Panel B: Uber index										
	Developed Economies					Emerging Economies				
		Parametric tests			Non-parametric test		Parametric tests			Non-parametric test
Daily time	CAR(%)	ORDIN	PATELL	A-PATELL	WSRT	CAR(%)	ORDIN	PATELL	A-PATELL	WSRT
Post-event window										
CAR[0,+5]	1.115	1.508	2.071**	1.604	1.064	1.342	2.766***	3.409***	2.551**	2.620***
CAR[0,+10]	1.554	1.552	2.762***	2.139**	1.258	3.103	4.722***	6.707***	5.020***	5.363***
CAR[0,+15]	3.361	2.784***	4.478***	3.468***	3.345***	5.727	7.227***	10.546***	7.893***	8.471***
CAR[0,+20]	3.959	2.862***	4.890***	3.787***	3.578***	6.853	7.548***	10.899***	8.156***	9.305***

Note: This table conducts an examination of Cumulative Abnormal Returns (CAR) across eight distinct test windows, focusing on both developed and emerging economies within the Asia Pacific region. Panel A delineates CAR results for the stock indices in the Asia Pacific region, while Panel B centers on CAR outcomes for Uber stock. The table systematically presents the findings of three parametric tests—t−statistics (ORDIN), Standardized Residual Test (PATELL), and Standardized Residual Test (Adj−PATELL)—depicted in columns 3−5. Furthermore, non−parametric test results, specifically the Wilcoxon signed−rank test (WSRT), are detailed in column 6. The statistical significance of results is denoted by p−values, where asterisks ***, **, and * signify significance at the 1%, 5%, and 10% levels, respectively.

5.2.1.   Index impact test

The Comparative Analysis reveals discernible trends in Asia Pacific stock indices between developed and emerging economies. Developed economies demonstrate a negative cumulative abnormal return (CAR) trend preceding the announcement ($CAR_{-20,-1} = -0.761\%$, MAVT = 2.587), succeeded by a positive trend thereafter ($CAR_{0,20} = 0.709\%$, MAVT = 2.268), implying potential opportunities for insider trading. In contrast, emerging economies exhibit a positive effect exclusively post-announcement ($CAR_{0,20} = 0.492\%$, MAVT = 3.135), indicating a distinct investment strategy adopted by investors in these economies.

5.2.2.   Stock response test

The analysis of Uber stock validates these observations. In developed economies, a positive effect is evident post−announcement ($CAR_{0,20} = 3.959\%$, MAVT = 3.779), while in emerging economies, the positive impact spans the test period, both before ($CAR_{-20,-1} = 3.765\%$, MAVT = 4.606) and after the announcement ($CAR_{0,20} = 6.853\%$, MAVT = 8.977). The impact on Uber stock consistently exhibits positivity, with a more pronounced effect observed in emerging economies. This contrasts with the impact on Asia Pacific stock indices, which manifests as non−uniform and relatively weaker.

The observed patterns in Asia Pacific Stock Indices in Developed Economies suggest a proactive market adjustment before the official announcement, indicating possible information leakage or

anticipation. Conversely, the analysis of Uber stock in developed economies suggests a delayed market response, potentially due to individual stock dynamics and cautious investor behavior. The observed positive effect in Asia Pacific Stock Indices in Emerging Economies materializes solely after the announcement, implying a delayed market response and potential disparities in information efficiency or market maturity. In contrast, the analysis of Uber stock in emerging economies reveals a sustained positive impact throughout the test period, signaling distinct dynamics compared to broad market indices.

The analysis delineates potential strategies for investors within the context of market dynamics, focusing on the implications of Uber's strategic announcements. In the Asia Pacific markets, investors equipped with preemptive insights into Uber's announcements targeting developed economies have the opportunity to capitalize on this information. By initiating a short sell position in the FTDAP index twenty days prior to the announcement, these informed investors can secure an average excess profit of 0.761%. Conversely, other market participants may adopt a different approach by acquiring the FTDAP index contemporaneously with the announcement and maintaining the position for twenty days, yielding an excess profit of 0.709%. An alternative strategy involves investing in the FTEAP index, which represents emerging markets, under the same conditions, to realize an excess profit of 0.492%. Regarding Uber's stock specifically, the analysis reveals more pronounced opportunities for investors, contingent upon their market knowledge and timing of entry. For those with advance knowledge in emerging markets, purchasing Uber shares twenty days before the announcement can lead to an average excess profit of 3.765%. In contrast, investors who buy the stock at the announcement and hold for twenty days can anticipate an excess profit of 6.853%. Additionally, an alternative strategy for developed economies entails purchasing Uber stock at the time of the announcement and holding for the same duration, resulting in an excess profit of 3.959%.

The empirical findings substantiate Hypothesis 1, delineating a statistically significant variance in cumulative abnormal returns (CAR) across developed and emerging economies in the Asia Pacific region in reaction to Uber's announcements. This variance underscores distinct market behaviors and investor responses attributable to diverse economic contexts and market maturities, rooted in the transformative influence of Uber in different regions. In developed economies, the trend observed—characterized by a decline in returns preceding the announcement, which subsequently reverses to positive—aligns with literature that examines similar dynamics in response to announcements within the peer-to-peer (P2P) sector, such as the study by Tavor (2024) on Airbnb's impact on emerging markets. This pattern suggests a nuanced anticipation by investors, potentially indicative of sophisticated market mechanisms and a proactive response to perceived opportunities or challenges presented by such announcements.

Conversely, emerging economies showcase a consistent positive effect post-announcement, which contrasts with the initial negative response observed in developed markets but aligns with the latter's post-announcement positive trend. This distinction highlights the optimistic outlook of investors in emerging economies towards Uber's strategic announcements, possibly driven by the company's significant socio-economic contributions in these regions, such as employment generation and infrastructure development, as highlighted in the literature by Surie and Koduganti (2016) and Basu(2019) . Moreover, the analysis of Uber stock itself reveals a universally positive effect post-announcement in both developed and emerging economies, further validated by Tavor's (2024) findings regarding Airbnb. This consistency across different markets emphasizes the perceived value

and impact of Uber's strategic moves within the P2P economy, resonating with investor confidence and the anticipated benefits of these announcements on Uber's operational and financial outlook.

5.3. *Uber announcements: Differential impact on stocks in Asia Pacific*

I investigate the influence of Uber's announcements on stock indices in developed and emerging economies within the Asia Pacific region. Utilizing cumulative abnormal return (CAR) metrics and categorizing announcements into positive and negative influences, the analysis offers visual insights through Figure 3 (a–d), supplemented by notable examples in Table 4.
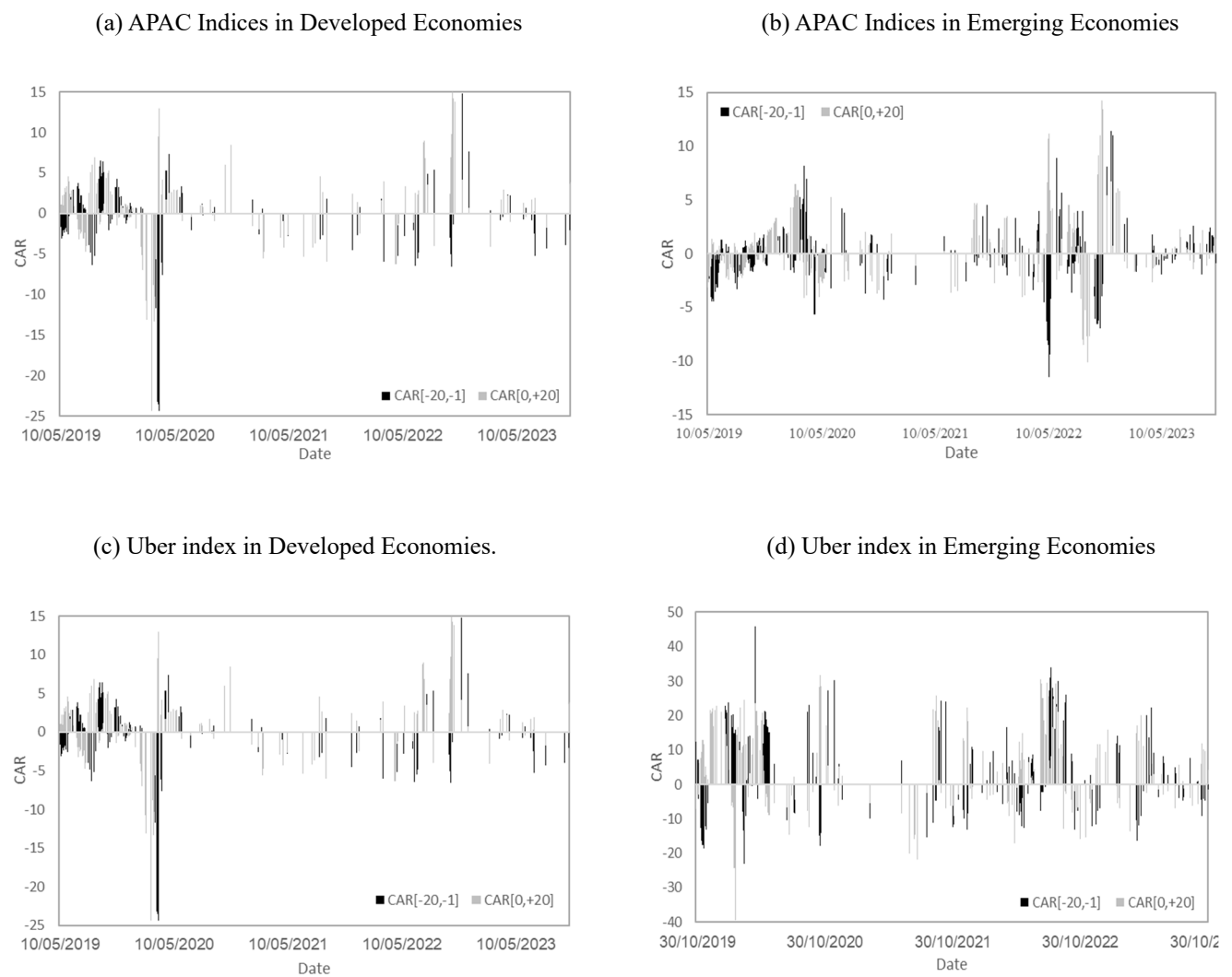
(a) APAC Indices in Developed Economies

(b) APAC Indices in Emerging Economies

(c) Uber index in Developed Economies.

(d) Uber index in Emerging Economies

Figure 3. Comparative analysis of CAR performance: pre− and post−announcement assessment. CAAR patterns across diverse sectors.

Note: The analysis of Cumulative Abnormal Return (CAR) performance during the pre−announcement period is denoted in black, whereas the post−announcement period is distinguished by a gray representation.

Table 4. Notable Uber announcements and their effects on developed and emerging economies.

Panel A: APAC Indices in Developed Economies			
Date	Event	CAR (%)	Description
Highest CAR Performance			
17/11/2022	118	14.781	Australian Financial Review − Restaurants worry Deliveroo demise leaves them at mercy of Uber Eats
07/12/2022	119	7.627	Reuters − Australia fines Uber $14m for misleading on fares and cancellation fees
Lowest CAR Performance			
20/03/2020	61	−24.399	Australian Financial Review — How a little bug upended our privileged lives
25/02/2020	168	−24.373	KrAsia — Chinese ride−hailing platform Didi set to challenge Uber Eats with Japan expansion
Panel B: APAC Indices in Emerging Economies			
Date	Event	CAR (%)	Description
Highest CAR Performance			
01/11/2022	472	14.225	Times of India — Wall Street opens broadly higher; Uber soars on forecast
29/11/2022	478	11.449	Business Standard (India) — Uber adds rear seatbelt reminder, SOS integration with cops in India
Lowest CAR Performance			
13/05/2022	390	−11.495	Business Standard India — Uber CEO's letter signals more scrutiny of investments, say experts
15/09/2022	461	−10.168	Trak.in (India) — Uber Hacked! Sensitive Info Like Internal Systems, Email, Slack Server Exposed
Panel C: Uber index in Developed Economies			
Date	Event	CAR (%)	Description
Highest CAR Performance			
16/04/2020	291	23.475	The Tech Portal — Uber's "Ubermedic" service for transporting frontline medical workers scales up to 10 cities in India
19/10/2020	333	31.843	The Economic Times — Uber introduces rider mask verification selfie feature in India
Lowest CAR Performance			
19/02/2020	252	−39.390	Economic Times — In a first in India, Karnataka is drafting separate labour law for gig workers
15/03/2020	281	−22.978	Telegraph India — 28−year−old woman forced to drive Uber after driver falls asleep
Panel D: Uber index in Emerging Economies			
Date	Event	CAR (%)	Description
Highest CAR Performance			
19/10/2020	78	31.843	Business Insider Australia — Uber reportedly wants to sell off part of its air taxi unit, casting doubt on the company's plans for flying vehicles in Australia
19/03/2020	141	45.810	Marketwatch — Uber stock surges 30% after company touts cost advantages, says Hong Kong business is recovering
Lowest CAR Performance			
15/04/2021	83	−29.109	Business Insider Australia — An Uber shareholder is demanding more transparency about the impact of the company's lobbying efforts
26/04/2022	97	−19.649	Reuters — Australian regulator sues Uber for misleading fares, seeks $19 mln penalty

Note: The table presents notable announcements, delineating their discernible positive and negative cumulative abnormal return (CAR) performances. Each entry includes the announcement date, event number, CAR performance, and a succinct description of the announcement.

5.3.1. Analysis of APAC indices in developed and emerging economies

Within developed economies of the Asia Pacific, Uber's positive announcements coincide with elevated abnormal returns, reflecting positive responses to regulatory stability, strategic vision, and perceived market advantages. Notable instances include the favorable market reaction to regulatory resolutions in Australia and potential market advantages arising from challenges faced by competitors like Deliveroo. Conversely, announcements leading to low abnormal returns signal concerns over operational challenges, economic uncertainties, and potential overconfidence, exemplified by negative reactions to disruptive events, superannuation−related concerns, and competitive threats from Didi. In emerging economies within the Asia Pacific, positive abnormal returns align with a focus on technological advancements and safety measures, as seen in innovations in India. However, the mixed reception of the push notification ad experiment in India underscores that not all innovations are uniformly accepted. Announcements leading to a significant decrease in abnormal returns indicate concerns about technology implementation, security breaches, and heightened scrutiny. Initiatives like robot food delivery in California and revelations of security breaches contribute to declines in investor confidence. In summary, investor sentiment in both developed and emerging economies in the Asia Pacific region exhibits a nuanced response to Uber's announcements. Positive inclinations are observed towards safety−focused technological innovations and positive market forecasts. In developed economies, reactions are notably influenced by regulatory stability, strategic vision, and perceived market advantages, while in emerging economies, emphasis on safety measures, technological advancements, and positive market outlooks drives positive abnormal returns. Negative reactions are consistent across both contexts when announcements involve security breaches, uncertainties in strategic direction, and potential overconfidence.

5.3.2. Analysis of Uber stock in developed and emerging economies

Analyzing Uber's stock response to announcements in developed economies reveals a correlation between positive abnormal returns and strategic shifts, cost advantages, and innovative services. This indicates investor confidence in Uber's business decisions. Conversely, announcements leading to a significant decrease in abnormal returns point to challenges such as legal issues, regulatory hurdles, and concerns about transparency, illustrating the adverse impact of controversies on investor trust and market valuation. In emerging economies within the Asia Pacific, positive abnormal returns align with strategic expansions and innovative services, showcasing a favorable market response to Uber's adaptability and responsiveness. Conversely, announcements causing a sharp drop in abnormal returns suggest challenges eroding investor confidence, including incidents affecting safety perceptions, regulatory uncertainties, and intensified competition in the market. In summary, developed economies demonstrate a strong link between strategic decisions and investor confidence, while challenges have a notable adverse impact. In emerging economies, positive responses align with adaptability and strategic expansions, with challenges affecting investor confidence more acutely.

6. Sector-Wide event impact assessment

Acknowledging the critical role of peer-to-peer (P2P) platforms in shaping the economic dynamics of the Asia Pacific region, this section explores how Uber's strategic announcements

influence the financial markets, focusing on Lyft and Airbnb. This analysis broadens the scope of investigation to include a sector-wide event impact assessment, capturing the extensive effects of such announcements and thereby deepening the understanding of the P2P sector's response within both developed and emerging economies. Lyft, established in 2012 and entering the stock exchange on September 19, 2019, serves as a pertinent example within the ride-sharing segment of the P2P economy. With 183 announcements in developed countries and 427 announcements in emerging countries, Lyft's inclusion in this analysis offers a comprehensive perspective to assess the broader market reactions to Uber's strategic decisions.

Similarly, Airbnb, founded in 2007 and making its stock market debut on December 11, 2020, represents the accommodation-sharing segment of the P2P economy. The analysis encompasses 67 announcements in developed countries and 201 in emerging countries for Airbnb. The smaller sample size for Airbnb, relative to the overall sample, is due to its recent public trading initiation, necessitating the exclusion of some announcements from the sample for analytical clarity. Despite these constraints, Airbnb's participation provides critical insights into the accommodation-sharing sector's market responses to Uber's announcements. In this section, I aim to elucidate the impacts of Uber's announcements on the cumulative abnormal returns (CAR) of Lyft and Airbnb stocks within the Asia Pacific region. By categorizing the responses according to the classification of developed and emerging economies, the goal is to highlight the nuanced effects of Uber's strategic communications on similar companies within the P2P economy. The findings of this investigation are presented in Table 5 and Figure 4, where Panel A and Figure 4a detail the analysis for Lyft, and Panel B and Figure 4b focus on Airbnb.

Table 5. Event study comparison in the P2P Sector: Developed vs. emerging economies in Asia Pacific region.

Note: This table presents an analysis of the impact of Uber's announcements on the Cumulative Abnormal Returns (CAR)

	Lyft index				Airbnb index			
	Developed Economies		Emerging Economies		Developed Economies		Emerging Economies	
Daily time	CAR(%)	ORDIN	CAR(%)	ORDIN	CAR(%)	ORDIN	CAR(%)	ORDIN
Pre-event window								
CAR[−20,−1]	−1.432	−0.909	0.173	0.165	−0.951	−0.490	0.137	0.108
CAR[−15,−1]	−1.607	−1.177	0.128	0.141	−0.628	−0.373	−0.800	−0.725
CAR[−10,−1]	0.639	0.573	0.783	1.057	0.142	0.103	−1.126	−1.250
CAR[−5,−1]	−0.139	−0.176	0.990	1.891*	−0.445	−0.459	0.607	0.953
Post-event window								
CAR[0,+5]	1.734	2.008**	0.656	1.143	−0.124	−0.117	0.474	0.680
CAR[0,+10]	0.607	0.519	2.074	2.670***	−2.817	−1.957*	−0.217	−0.230
CAR[0,+15]	2.761	1.959*	3.515	3.751***	−4.196	−2.417**	0.609	0.534
CAR[0,+20]	2.419	1.498	4.495	4.188***	−4.875	−2.451**	1.076	0.824

for two prominent Peer-to-Peer (P2P) companies, Lyft and Airbnb, across eight distinct testing windows within the Asia Pacific region. Panel A details the CAR findings for Lyft, and Panel B focuses on the CAR results for Airbnb. Additionally, the table includes the outcomes of parametric tests, specifically the t-statistics (ORDIN), to assess the significance of the results. The statistical significance of results is denoted by p-values, where asterisks ***, **, and * signify significance at the 1%, 5%, and 10% levels, respectively.
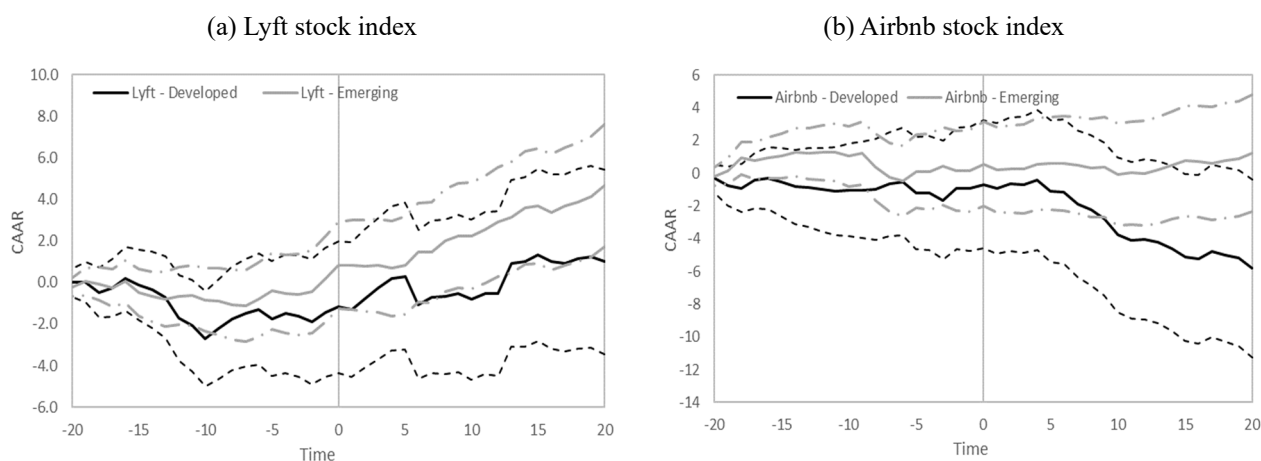
(a) Lyft stock index

(b) Airbnb stock index

Figure 4. Comparative CAAR across developed and emerging economies: A sector-wide event impact assessment.

Note: Figure 4 illustrates Cumulative Average Abnormal Returns (CAAR) utilizing black lines for developed economies and gray lines for emerging economies over a 41-day event window. The dashed lines represent the 95% confidence intervals.

In this section, the focus shifts to a detailed comparative analysis concerning the influence of Uber's strategic announcements on the performance metrics, specifically the Cumulative Abnormal Returns (CAR), of Lyft and Airbnb shares. This investigation provides insights into the differential impacts observed between two significant players in the peer-to-peer (P2P) economy, unveiling the intricate relationship between corporate announcements in the P2P sector and their reverberations across financial markets in the Asia Pacific region. Regarding Lyft, the data indicate a positive aftermath in developed economies within a fifteen-day window post-announcement, as reflected in the CAR (CAR0,+15 = 2.761%, ORDIN = 1.959). Conversely, emerging economies exhibit a more pronounced and enduring positive impact, starting five days before the announcement (CAR−5,−1 = 0.990%, ORDIN = 1.891) and extending to twenty days thereafter (CAR0,+20 = 4.495%, ORDIN = 4.188). This variance suggests that emerging markets respond more robustly and proactively to Uber's announcements, possibly due to differing market dynamics and investor perceptions in these regions compared to their developed counterparts. In contrast, the analysis of Airbnb stock reveals a distinct scenario. The impact is predominantly negative in developed economies during the twenty-day period following Uber's announcements (CAR0,+20 = −4.875%, ORDIN = −2.451). This outcome highlights the nuanced market sensitivities and the complex interplay of investor expectations and strategic corporate events within the P2P ecosystem.

A potential explanation for the observed disparities in the responses of Lyft and Airbnb to Uber's announcements could be attributed to a confluence of factors, including market maturity, investor expectations, and the unique operational contexts of these companies within the P2P sector. The difference in responses between Lyft and Airbnb, in particular, merits further exploration. For Lyft, the predominantly positive impact in emerging markets may be linked to its direct operational similarities with Uber, given both companies operate within the ride-sharing domain. This parallel could lead investors in emerging markets to anticipate that positive developments or strategic advancements for

Uber may similarly benefit Lyft due to comparable market dynamics and growth opportunities in these regions. The optimism towards technological adoption and the expansion potential of ride-sharing services in less saturated markets may further amplify this effect.

In contrast, Airbnb operates in a distinctly different segment of the P2P economy, focusing on accommodation sharing. The negative impacts observed in developed economies in response to Uber's announcements could be reflective of Airbnb's unique challenges, including greater sensitivity to regulatory scrutiny and market saturation within these regions. Developed economies may already exhibit high levels of competition and regulatory pressures in the accommodation-sharing sector, factors that could predispose investors to react negatively to Uber's announcements, anticipating indirect repercussions on Airbnb's operational stability or growth prospects. Additionally, the operational distinctions between ride-sharing and accommodation-sharing may lead to divergent investor perceptions and strategic responses within the financial markets. While Lyft's business model closely mirrors that of Uber, offering more direct comparisons and perceived synergies, Airbnb's model diverges, potentially leading to a different set of investor expectations and market assumptions regarding the impact of Uber's strategic moves.

From an investment strategy perspective, the analysis elucidates potential avenues for market participants. Investors with prior knowledge of Uber's announcements targeting emerging markets could leverage this information by acquiring Lyft shares five days before the announcement, potentially yielding an average return of 0.990%. Moreover, other investors might consider purchasing Lyft shares at the announcement moment to secure a 4.495% return over the subsequent twenty days. In the context of developed economies, an investment approach could entail buying Lyft stock at the announcement, with an anticipated gain of 1.734% in the ensuing five days, or alternatively, short selling Airbnb stock at the announcement to realize a 4.875% profit over the following twenty days.

7. Robustness check

The robustness check section employs two complementary tests, integrating both alternative non−parametric test and an additional model to fortify the reliability and robustness of the research findings. The Generalized Sign Test (G-SIGN), proposed by Cowan (1992), serves as the non−parametric test, while the Mean Adjusted Returns (MAR) model is applied as an additional parametric model. Both tests are utilized to estimate cumulative abnormal returns (CAR) in both developed and emerging economies within the Asia Pacific region. The outcomes of these assessments are presented in Table 6, with panels A and B delineating the cumulative abnormal returns derived from the Generalized Sign Test (G-SIGN) and the Mean Adjusted Returns (MAR), respectively. This multifaceted testing strategy enhances the credibility and resilience of the research outcomes.

The examination of the robustness analysis of the two tests reveals a similar trend that aligns with the results obtained in the standard tests assessing the impact of Uber announcements on both developed and emerging economies in the Asia Pacific region. In developed economies, a negative trend in Cumulative Abnormal Returns (CAR) precedes the announcement, followed by a subsequent positive trend, suggesting potential opportunities for insider trading. Conversely, emerging economies demonstrate an uneven impact in both tests. When analyzing Uber stock, a positive effect is evident

after the announcement in developed economies, while in emerging economies, this positive effect extends across the testing period.

Table 6. Assessing the robustness of cumulative abnormal returns (CAR) in developed and emerging economies.

Panel A: Generalized Sign Test (G−SIGN)								
	APAC indices				Uber index			
	Developed Economies		Emerging Economies		Developed Economies		Emerging Economies	
Daily time	CAR(%)	G-SIGN	CAR(%)	G-SIGN	CAR(%)	G-SIGN	CAR(%)	G-SIGN
Pre-event window								
CAR[−20,−1]	−0.761	−0.319	−0.026	−1.242	0.747	0.975	3.765	3.899***
CAR[−15,−1]	−0.728	−1.973**	0.008	−1.499	0.397	1.289	2.734	2.161**
CAR[−10,−1]	−0.299	0.318	−0.158	−3.208***	0.969	−0.597	2.150	1.855*
CAR[−5,−1]	−0.016	−0.955	−0.045	0.125	−0.149	0.817	1.242	2.468**
Post-event window								
CAR[0,+5]	0.074	0.190	0.013	−0.730	1.115	1.603	1.342	2.264**
CAR[0,+10]	0.135	2.481**	0.170	0.552	1.554	1.918*	3.103	4.308***
CAR[0,+15]	0.328	1.590	0.345	−0.388	3.361	3.018***	5.727	6.353***
CAR[0,+20]	0.709	3.372***	0.492	1.150	3.959	2.704***	6.853	7.069***
Panel B: Mean Adjusted Returns (MAR)								
	APAC indices				Uber index			
	Developed Economies		Emerging Economies		Developed Economies		Emerging Economies	
Daily time	CAR(%)	ORDIN	CAR(%)	ORDIN	CAR(%)	ORDIN	CAR(%)	ORDIN
Pre-event window								
CAR[−20,−1]	−0.720	−2.155**	−0.258	−0.949	−1.191	−0.759	2.345	2.215**
CAR[−15,−1]	−0.722	−2.496**	−0.213	−0.907	−1.703	−1.253	1.962	2.141**
CAR[−10,−1]	−0.250	−1.058	−0.221	−1.150	−0.241	−0.217	1.471	1.966**
CAR[−5,−1]	0.088	0.525	−0.210	−1.548	−0.425	−0.541	1.044	1.973**
Post-event window								
CAR[0,+5]	0.234	1.278	−0.540	−3.627***	1.376	1.601	−0.020	−0.034
CAR[0,+10]	0.344	1.387	−0.417	−2.067**	1.316	1.131	1.579	2.012**
CAR[0,+15]	0.761	2.547**	−0.226	−0.929	3.972	2.830***	3.585	3.787***
CAR[0,+20]	1.208	3.532***	−0.141	−0.507	4.538	2.822***	4.123	3.802***

Note: The table offers an examination of the robustness of cumulative abnormal returns (CAR) derived from two distinct tests. Panels A and B present the cumulative abnormal returns obtained from the Generalized Sign Test (G-SIGN) and the Mean Adjusted Returns (MAR), respectively.

8. Discussion

I undertook an exploration of Uber's potential disruption in the stock markets of both developed and emerging economies in the Asia Pacific region. The principal aim was to furnish insights beneficial to capital market participants and policymakers. Leveraging data from crunchbase.com, Uber's announcements were scrutinized for their impact on financial markets, with a distinction between developed and emerging economies based on Morgan Stanley Capital International (MSCI) country

lists. The methodological framework in this study involved two major tests. The 'Index Impact Test' examined the influence of Uber announcements on stock indices in the Asia Pacific region for both developed and emerging economies, providing insights into broader market dynamics. The 'Stock Response Test' investigated the impact on Uber's stock returns, offering an examination of specific reactions within the realm of individual stock dynamics and investor behavior.

The Comparative Analysis of the event study unveiled distinctive trends in Asia Pacific stock indices. Developed economies exhibited a negative cumulative abnormal return (CAR) preceding announcements, succeeded by a positive trend, suggesting potential insider trading opportunities. Conversely, emerging economies displayed a positive effect exclusively post−announcement, reflecting a unique investment strategy. Uber stock analysis validated these trends, showing a positive impact post−announcement in developed economies and a sustained positive impact throughout the entire test period in emerging economies. Analysis of the observed patterns in Asia Pacific Stock Indices in Developed Economies hinted at proactive market adjustments before official announcements, possibly indicating information leakage or anticipation. In contrast, Uber stock analysis in developed economies revealed a delayed market response, potentially due to individual stock dynamics and cautious investor behavior. In Emerging Economies, the positive effect in Asia Pacific Stock Indices manifested solely after the announcement, suggesting delayed market response and disparities in information efficiency or market maturity. Uber stock analysis in emerging economies showed distinct dynamics compared to broad market indices.

Transitioning to the characterization of announcements, investor sentiment in both developed and emerging economies within the Asia Pacific region revealed nuanced responses. Positive inclinations were evident toward safety−focused technological innovations and positive market forecasts. Developed economies' reactions were shaped by factors such as regulatory stability, strategic vision, and perceived market advantages, while emerging economies emphasized safety measures, technological advancements, and optimistic market outlooks, resulting in positive abnormal returns. Negative reactions remained consistent across both contexts for announcements involving security breaches, uncertainties in strategic direction, and potential overconfidence. These observations offer insights into the dynamics of investor sentiment within the Asia Pacific stock indices. In Uber stock analysis in developed economies, a strong link was identified between strategic decisions and investor confidence, with challenges having a notably adverse impact. In emerging economies, positive responses aligned with adaptability and strategic expansions, while challenges affected investor confidence more acutely.

Within the ambit of this study, a sector-wide event impact assessment was undertaken, extending the investigation beyond Uber to encompass its influence within the broader peer-to-peer (P2P) economy, specifically examining the performance of Lyft and Airbnb shares. This additional analysis offers a comparative perspective on the repercussions of Uber's strategic announcements on the Cumulative Abnormal Returns (CAR) of these companies, thereby elucidating the complex interplay between corporate communications in the P2P sector and their ripple effects across the financial landscapes of the Asia Pacific region. For Lyft, the findings underscore a positive reaction within developed economies following Uber's announcements, suggesting an anticipatory or synergistic market sentiment towards companies within the same sector. Interestingly, emerging economies demonstrated a more robust and sustained positive trajectory, initiating before and persisting after the

announcements. This pattern indicates a differential market perception and investor behavior towards Lyft in these economies, possibly reflective of varying degrees of market saturation, investor optimism regarding growth prospects, or the perceived synergistic benefits within the P2P sector. Conversely, the analysis pertaining to Airbnb delineates a contrasting scenario. Here, the impact on stock performance was largely negative in developed economies in the aftermath of Uber's announcements. This divergence in response could be attributed to a multitude of factors, such as differing operational dynamics within the P2P sector, distinct market expectations for Airbnb, and the potential for Uber's announcements to be perceived as indirectly competitive or detrimental to Airbnb's market positioning.

While this study contributes valuable insights into the impact of Uber's strategic announcements on capital markets in the Asia Pacific region and extends its analysis to the broader peer-to-peer (P2P) sector, it operates within certain methodological confines. Notably, the data spans from May 2019 to November 2023, a period marked by the global COVID-19 pandemic. The pandemic's economic implications are acknowledged in the literature review, reflecting its widespread influence. However, my focus of this study remains on the direct effects of Uber's announcements on market dynamics. Additionally, the study considers the influence of regulatory stability on market responses within the literature review, highlighting its potential significance. However, this aspect is not directly quantified within the analysis, suggesting an area for deeper investigation in future research endeavors. Such an exploration would enrich the dialogue on corporate announcements and capital market reactions, including the consideration of broader economic contexts and the role of regulatory environments.

9. Conclusions

I explored Uber's impact on Asia Pacific stock markets, providing insights for participants and policymakers. Leveraging crunchbase.com data, the analysis used the "Index Impact Test" and "Stock Response Test". Developed economies exhibited a unique negative trend before announcements, potentially indicating insider trading, while emerging economies showed a positive post-announcement effect. Uber stock analysis supported these trends, revealing positive impacts in developed economies post-announcement and sustained positivity in emerging economies. Proactive adjustments in Asia Pacific Stock Indices in Developed Economies hinted at potential information leakage. Uber stock analysis in developed economies showed a delayed market response, and in emerging economies, a positive effect occurred solely post-announcement.

In addition to the insights gained from examining Uber's impact on the Asia Pacific stock markets, I broadened the analysis to assess the effects of Uber's strategic announcements on other key players within the peer-to-peer (P2P) economy, notably Lyft and Airbnb. This extended investigation reveals the intricate dynamics at play within the P2P sector, demonstrating how Uber's announcements not only affect its own stock but also influence the market performance of comparable companies. The findings suggest that while Lyft generally experiences a positive market response, indicating a potential synergistic effect among P2P entities in developed economies, Airbnb's stock response presents a contrast, particularly in developed markets where the impact tends to be negative post-announcement. These divergent outcomes highlight the nuanced and varied effects of Uber's strategic moves across the P2P landscape, underscoring the importance of considering sector-wide implications when evaluating corporate announcements.

In investor sentiment, positive inclinations were observed towards safety−focused innovations and optimistic market forecasts. Developed economies' reactions were influenced by regulatory stability, strategic vision, and perceived market advantages, while emerging economies emphasized safety measures, technological advancements, and positive market outlooks. Negative reactions remained consistent for announcements involving security breaches, uncertainties, and potential overconfidence. In summary, this study sheds light on Uber's impact, emphasizing the need to consider regional nuances, offering guidance for stakeholders, and suggesting avenues for further research in this dynamic field.

10. Policy implications

Investigating Uber's disruptive impact on stock markets in the Asia Pacific region, I provide crucial insights for policymakers and capital market participants. Utilizing data from crunchbase.com and employing the 'Index Impact Test' and 'Stock Response Test,' the research discerned distinctive trends in Asia Pacific stock indices, shedding light on Uber's influence on market dynamics and investor sentiment.

Guidance for Policymakers:
1. *Tailored Regulatory Approaches:* Policymakers should contemplate the recognition of regional nuances by tailoring regulatory approaches to the distinct patterns observed in developed and emerging economies. This ensures effective policy responses aligned with the specific market dynamics of each context.
2. *Ensuring Timely Information Dissemination:* Policymakers should collaborate with stakeholders to acknowledge the importance of timely market adjustments in developed economies, signaling potential information leakage or anticipation. Implementing measures to ensure transparent information dissemination is vital for maintaining market integrity.
3. *Building Investor Confidence:* Policymakers should proactively foster initiatives that build investor confidence, addressing the delayed market response in developed economies and the distinct dynamics in emerging economies. Tailored policies can effectively address challenges specific to each market context, thereby promoting a positive investment environment.
4. *Encouraging Safety Measures and Innovation:* Policymakers have an opportunity to stimulate positive inclinations towards safety−focused technological innovations and optimistic market outlooks. By encouraging and regulating safety measures and technological advancements that align with market sentiments, policymakers can contribute to a conducive investment environment.
5. *Mitigating Concerns for Positive Investment Environment:* Policymakers should engage in clear communication and strategic planning to actively mitigate negative reactions related to security breaches, uncertainties, and potential overconfidence. By doing so, they can play a pivotal role in creating and sustaining a positive investment environment.

Use of AI tools declaration

The author declares that they have not used Artificial Intelligence (AI) tools in the creation of this article.

Conflict of interest

The author declares no conflicts of interest in this paper.

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