Pasokan Barang Konsumsi dan Konsumsi Perkapita Penduduk Bali Akibat Pandemi Covid-19

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Abstrak

Pandemi Covid-19 yang terjadi saat ini mempengaruhi geliat perekonomian. Penelitian ini bertujuan menguji perubahan pasokan barang konsumsi ke Bali dari luar Bali di wilayah Indonesia dan perubahan konsumsi perkapita Penduduk Bali, akibat adanya wabah Covid-19. Ada dua peristiwa yang diamati, peristiwa ke 1 adalah pengumuman kasus pasien pertama positif Covid-19 di Indonesia, dan peristiwa ke 2 adalah penetapan status bencana nasional oleh pemerintah Indonesia. Analisis data dilakukan menggunakan uji beda, dengan program SPSS V.23. Hasil pengujian menemukan terdapat perbedaan pasokan barang konsumsi ke Bali dan konsumsi perkapita Penduduk Bali pada peristiwa ke 1 dan ke 2. Rata-rata pasokan barang konsumsi ke Bali dan konsumsi perkapita masyrakat Bali menurun secara signifikan setelah pengumuman kasus pertama positif Covid-19 dan kemudian semakin menurun secara signifikan setelah penetapan status bencana nasional.

Kata kunci:
Covid-19; pasokan; konsumsi; event study

Pendahuluan

Menyebarnya wabah Covid-19 secara masif di dunia termasuk Indonesia tentunya berdampak pada geliat perekonomian. World Health Organization (WHO) telah menyatakan bahwa Corona Virus Disease 2019 (COVID-19) sebagai pandemik dan Indonesia telah menyatakan bahwa covid-19 sebagai bencana non alam berupa wabah penyakit yang wajib dilakukan upaya penanggulangan sehingga tidak terjadi peningkatan kasus. Dimulai sejak pemerintah Indonesia pada 2 Maret 2020 mengumumkan 2 orang pasien kasus Covid-19 pertama yang terkonfirmasi di Indonesia, diikuti kemudian pada 14 Maret 2020 Presiden Jokowi menetapkan wadah Covid-19 sebagai bencana nasional. Keadaan ini tentu mempengaruhi keleluasan gerak pada berbagai aktivitas masyarakat, perusahaan dan negara. Distribusi barang antar pulau di Indonesia

merupakan kegiatan vital menjadi terganggu. Bali salah satu daerah di Indonesia, banyak mengandalkan pasokan barang konsumsi dari luar Bali, tercatat lebih dari 70%, utamanya pasokan dari Jawa, menjadi terganggu karena beberapa daerah di luar Bali yang selama ini sebagai pemasok sudah melakukan karantina wilayah. Situasi yang sama Covid -19 juga telah mengurangi pendapatan Penduduk Bali dan berimbas pada konsumsi perkapita. Tabel 1 menunjukkan persentase pasokan barang konsumsi dari luar Bali ke Bali dan Tabel 2 menunjukkan tingkat konsumsi perkapta Penduduk Bali, selama kurun waktu Desember 2019 – Maret 2020. Tabel 3 menunjukkan tingkat konsumsi perkapita Penduduk Bali selama lima tahun terakhir.

Tabel 1 Pasokan Barang Konsumsi ke Bali dari luar Bali
Periode Desember 2019 - Maret 2020

Bulan	Pasokan barang konsumsi di Bali (makanan dan non makanan)
Desember 2019	71.35%
Januari 2020	70.78%
Pebruari 2020	65,17%
Maret 2020	40.62%

Sumber : Data diolah

Tabel 1 menunjukkan persentase penurunan terus setiap bulan. Penurunan terbesar terjadi pada Maret 2020 yaitu 40.62%, yaitu pada bulan dimana ditemukan kasus Covid-19 di Indonesia dan pemerintah menetapkan status bencana nasional. Penurunan di bulan Maret bahkan hampir dua kali lipat dari bulan Desember 2019, hal tersebut mengindikasikan bahwa penetapan status bencana nasional berdampak cukup besar untuk menurunkan jumlah pasokan barang konsumsi di Bali.

Tabel 2 Konsumsi Perkapita (Makanan dan Non Makanan) Penduduk Bali
Periode Desember 2019-Maret 2020

Bulan	Konsumsi Perkapita (makanan dan non makanan)
Desember 2019	Rp. 115.681
Januari 2020	Rp. 112.715
Pebruari 2020	Rp. 107.530
Maret 2020	Rp. 90.379

Sumber : Data diolah

Tabel 2 menunjukkan penurunan jumlah konsumsi perkapita setiap bulan. Penurunan terbesar terjadi pada Maret 2020 dibandingkan bulan Pebruari 2020 yaitu Rp. 17.151. Seperti diketahui bahwa pada bulan Maret 2020 pertama kali ditemukan kasus Covid-19 di Indonesia dan pemerintah menetapkan status bencana nasional.

Tabel 3 Konsumsi Perkapita (Makanan dan Non Makanan) Penduduk Bali Tahun 2015- 2019

Tahun	Konsumsi Perkapita (makanan dan non makanan)
2015	Rp. 1.045.145
2016	Rp. 1.099.561
2017	Rp. 1.332.085
2018	Rp. 1.367.032
2019	Rp. 1.387.154

Sumber : Data diolah

Tabel 3 menunjukkan dalam keadaan normal terjadi peningkatan konsumsi perkapita penduduk Bali setiap tahun dari tahun 2015 - 2019.

Dalam penelitian ini terdapat dua tujuan. Tujuan pertama untuk menguji pengaruh kasus Covid-19 terhadap jumlah pasokan barang konsumsi di Bali, dilakukan dengan jumlah pasokan barang konsumsi ke Bali disekitar peristiwa. Tujuan penelitian kedua menguji konsumsi perkapita penduduk Bali, dilakukan dengan membandingkan rata-rata konsumsi perkapita sebelum dan sesudah peristiwa.

Literatur Review dan Hipotesis

Jogiyanto (2012: 392), dalam signaling theory (teori sinyal) dijelaskan bahwa informasi yang dipublikasikan sebagai suatu pengumuman akan memberikan sinyal bagi pihak yang berkepentingan dalam pengambilan keputusan. Jika pengumuman tersebut mengandung nilai positif, maka diharapkan akan ada reaksi pada waktu pengumuman tersebut diterima oleh pihak yang berkepentingan. Reaksi tersebut ditunjukkan dengan adanya perubahan aktivitas. Pihak yang berkepentingan terlebih dahulu menginterpretasikan dan menganalisis informasi tersebut sebagai good news atau bad news (Wang & Zhu, 2013; Widnyana, et al., 2020). Hasil dari interpretasi informasi inilah nantinya yang akan mempengaruhi pengambilan keputusan, jika banyak pihak yang berkepentingan berpandangan pesimis akibat *bad news* dari informasi yang diterima, maka ia akan mengurangi aktivitasnya. Sebaliknya jika pihak yang berkepentingan memandang optimis akibat *good news* dari informasi yang diterima, maka ia akan memperkuat aktivitasnya (Hu, 2017; Widnyana et al., 2019).

Beberapa penelitian terkait suatu peristiwa berdampak terhadap reaksi pasar (MacKinlay, 1997; Cready & Gurun, 2010), kerjasama distribusi (Yu et al., 2001; Zhao et. Al., 2002; Simatupang et al, 2004; Kwon & Suh, 2004), ditribusi barang (Ogden,

2006; Prajogo & Olhager, 2012), kinerja rantai pasok (Panayides & Lun, 2009; Wu et al.. 2014), perilaku konsumsi (Teppa, 2014), pengeluaran konsumsi (Ezeji et al., 2015; Varlamova & Larionova, 2015), konsumsi rumah tangga (Tapsin & Aycan, 2014; Ioan, 2015; Mignouna, 2015; Nicklaus, 2015; Varlamova & Larionova, 2015), konsumsi masyarakat (Fikri & Amri, 2014; Leon & Rafael, 2015).

Hipotesis 1 : Terdapat perbedaan pasokan barang konsumsi ke Bali karena adanya wabah Covid-19.

Hipotesis 2 : Terdapat perbedaan konsumsi perkapita penduduk Bali karena adanya wabah Covid-19

Metode

Penelitian ini merupakan penelitian kuantitatif dari suatu studi peristiwa, yaitu studi yang mempelajari reaksi pasar terhadap suatu peristiwa (*event*) yang informasinya dipublikasikan sebagai suatu pengumuman. Event study dapat digunakan untuk menguji kandungan informasi dari suatu pengumuman (MacKinlay, 1997)

Data penelitian ini menggunakan dari data Bank Indonesia dan biro pusat statistik provinsi Bali tahun 2019, kemudian diolah sesuai kebutuhan penelitian. Analisis data menggunakan uji beda dengan bantuan SPSS versi 23 (Ghozali, 2105).

Pengujian pasokan barang konsumsi karena adanya peristiwa Covid-19

Suatu pengumuman mengandung tentunya informasi, maka beberapa pihak terkait akan bereaksi di sekitar waktu pengumuman (Cready & Gurun, 2010). Reaksi tersebut termasuk pasokan barang konsumsi yang masuk ke Bali dari luar Bali. Untuk mengetahui reaksi tersebut dilakukan dengan menguji perbedaan/ gap pasokan barang konsumsi secara statistik. Gap pasokan barang konsumsi adalah perbedaan pasokan yang terjadi karena suatu peristiwa dengan pasokan konsumsi saat keadaan normal (Falk & Levy, 2009). Jika pasokan barang konsumsi suatu peristiwa sama dengan pasokan barang konsumsi normal, maka tidak terjadi gap pasokan barang konsumsi atau gap pasokan barang konsumsi sama dengan nol (Sujono, 2016). Jika rata-rata pasokan barang konsumsi sama dengan nol, berarti tidak ada kandungan informasi dari perubahan pasokan barang konsumsi yang terjadi. Pengertian waktu di sekitar peristiwa dalam penelitian ini adalah dari tujuh hari sebelum peristiwa sampai tujuh hari setelah peristiwa (Groenwold, 2014).

Perhitungan pasokan barang konsumsi karena suatu peristiwa dalam penelitian ini dirumuskan pada persamaan (1). Perhitungan pasokan konsumsi normal menggunakan model-adjusted beta, dirumuskan pada persamaan (2). Periode estimasi umumnya merupakan periode sebelum periode peristiwa. Periode peristiwa disebut juga periode pengamatan atau jendela peristiwa. Perhitungan gap pasokan barang konsumsi terdapat pada persamaan (3).

Perhitungan pasokan barang konsumsi karena suatu peristiwa sesuai persamaan (2):

$$RDS_t = \frac{DS_t - DS_{t-1}}{DS_{t-1}} \quad \ldots\ldots (1)$$

Dimana: RDS_t = realisasi pasokan barang konsumsi pada periode ke-t, DS_t = pasokan barang konsumsi pada periode ke-t, DS_{t-1} = pasokan barang konsumsi satu hari sebelum periode ke-t

Untuk menghitung pasokan barang konsumsi normal menggunakan model-adjusted beta yang terdapat pada persamaan (2) dengan rumus :

$$EDS_t = \alpha + \beta.DS_t + e_t \quad \ldots\ldots (2)$$

Dimana: EDS_t = pasokan barang konsumsi normal pada periode estimasi ke-t, α= intercept, β= koefisien slope, DS_t = pasokan barang konsumsi normal pada periode ke-t, e_t = kesalahan residu pada periode estimasi ke-t.

Untuk menghitung gap pasokan barang konsumsi adalah dengan mengurangkan pasokan barang konsumsi karena peristiwa dengan pasokan barang konsumsi normal. Gap pasokan barang konsumsi dapat dihitung dengan rumus pada persamaan (3):

$$GDS_t = RDSt - EDSt \quad \ldots\ldots (3)$$

Dimana: GDS_t = Gap pasokan barang konsumsi pada periode ke-t, RDS_t = pasokan barang konsumsi karena peristiwa pada periode ke-t, EDS_t = pasokan barang konsumsi normal pada periode estimasi ke-t.

Analisis data menggunakan pengujian hipotesis satu variabel yang diproses dengan program SPSS23.

Pengujian konsumsi perkapita karena adanya peristiwa Covid-19

Untuk menjawab reaksi masyarakat yang ditunjukkan dengan konsumsi perkapita karena adanya pengumuman covid-19. Untuk menguji apakah adanya peristiwa Covid-19 menyebabkan terjadinya perbedaan konsumsi perkapita penduduk Bali sebelum dan setelah peristiwa pengumuman oleh pemerintah.

Dalam menghitung perubahan konsumsi perkapita menggunakan rumus pada persamaan (4) berikut:

$$PCK_t = \frac{CK_t - CK_{t-1}}{CK_{t-1}} \quad \text{.....} \quad (4)$$

Dimana: PCK_t = Perubahan konsumsi perkapita pada periode ke-t, CK_t = konsumsi perkapita pada periode ke-t, CK_{t-1} = konsumsi perkapita satu hari sebelum periode ke-t. Analisis data pengujian ini menggunakan pengujian beda dua rata-rata sampel independen yang diproses dengan program SPSS23.

Pembahasan

Hasil pengujian pasokan barang konsumsi karena adanya peristiwa Covid-19

Tabel 1 menunjukkan statistik deskriptif pasokan konsumsi ke Bali dari luar Bali pada peristiwa ke 1 dan ke 2.

Tabel 1 Statistik Deskriptif Pasokan Barang Konsumsi

Hari	Peristiwa 1		Peristiwa 2	
	Mean	Std. Dev	Mean	Std. Dev
H-7	-0.0106	0.0023	-0.0323	0.0173
H-6	-0.0235	0.0116	-0.0473	0.0176
H-5	0.0002	0.0129	-0.0521	0.0189
H-4	-0.0018	0.0128	0.0001	0.0143
H-3	-0.0165	0.0115	-0.0253	0.0167
H-2	0.0007	0.0093	0.0005	0.0124
H-1	-0.0035	0.0135	-0.0173	0.0172
H0	-0.0015	0.0141		
H+1	-0.0127	0.0187	-0.0431	0.0116
H+2	-0.0235	0.0142	-0.0567	0.0134
H+3	-0.0256	0.0171	-0.0854	0.0143
H+4	-0.0308	0.0182	-0.0721	0.0139
H+5	-0.0323	0.0173	-0.0623	0.0137
H+6	-0.0473	0.0176	-0.0125	0.0139
H+7	-0.0521	0.0189	-0.0104	0.0282
Min	-0.0521		-0.0721	
Max	0.0007		0.0005	

Sumber : Analisis SPSS (diolah)

Berdasarkan Tabel 1 terlihat bahwa peristiwa 2 yaitu penetapan status bencana nasional menjadi momentum karantika wilayah, sehingga dianggap titik nol tanggal peristiwa (H0). Terlihat juga bahwa terjadi perubahan jumlah pasokan yang agak besar di sekitar peristiwa 1 dan peristiwa 2.

Tabel 2 menunjukkan hasil uji signifikansi pasokan barang konsumsi ke Bali dari luar Bali pada peritiwa ke 1 dan ke 2

Tabel 2 Hasil Uji Signifikansi Pasokan Barang Konsumsi

Hari	Peristiwa 1			Peristiwa 2		
	T	Sig. (2-tailed)	Mean Difference	T	Sig. (2-tailed)	Mean Difference
H-7	0.413	0.652	-0.01037	-0.328	0.681	0.01058
H-6	0.330	0.724	0.01092	-1.301	0.679	0.01146
H-5	0.280	0.723	0.01311	-1.173	0.647	-0.01183
H-4	0.270	0.724	0.01092	-1.569	0.234	-0.01487
H-3	-0.317	0.541	-0.01165	-1.071	0.215	-0.01528
H-2	1.724	0.190	0.01580	-0.119	0.766	-0.01088
H-1	-1.182	0.140	-0.01767	-1.297	0.300	-0.01732
H0	1.471	0.171	0.01708			
H+1	-0.608	0.594	-0.01114	-0.479	0.687	0.01104
H+2	-0.652	0.418	-0.01253	1.012	0.422	0.01576
H+3	0.071	0.778	0.01132	0.475	0.581	0.01238
H+4	0.067	0.778	0.01078	0.455	0.471	0.01024
H+5	-0.428	0.681	0.01058	0.486	0.534	0.01213
H+6	-1.401	0.679	0.01146	0.575	0.550	0.01238
H+7	-1.273	0.647	-0.01183	0.212	0.738	0.01249

Sumber : Analisis SPSS (diolah)

Berdasarkan Tabel 2, menunjukkan bahwa terdapat perbedaan pasokan barang konsumsi yang signifikan di sekitar tanggal pengumuman pasien pertama Covid-19 (peristiwa ke 1) dan di sekitar tanggal pengumuman penetapan status bencana nasional (peristiwa ke 2).

Hasil pengujian konsumsi perkapita karena adanya peristiwa Covid-19

Tabel 3 menunjukkan hasil uji normalitas variabel konsumsi perkapita penduduk Bali.

Tabel 3 Hasil Uji Normalitas Variabel

Variabel	Waktu	Kolmogorov-Smirnov[a]		Shapiro-Wilk	
		Statistic	Sig.	Statistic	Sig.
PCK_1	sebelum	0.118	0.116*	0.942	0.632
	sesudah	0.120	0.132*	0.919	0.467
PCK_2	sebelum	0.191	0.200*	0.918	0.452
	sesudah	0.141	0.200*	0.955	0.773
Keterangan: - PCK adalah konsumsi perkapita - subscript 1 dan 2 menyatakan peristiwa 1 dan peristiwa 2					

Berdasarkan Tabel 3 menunjukkan hasil yang seluruhnya tidak signifikan (sig.>0.05) berarti bahwa hipotesis nol diterima. Data yang dianalisis berdistribusi normal. Selanjutnya pengujian hipotesis penelitian menggunakan uji parametrik yaitu independent sample t-test.

Tabel 4 menunjukkan statistik deskriptif konsumsi perkapita penduduk Bali, sebelum dan sesudah kedua peristiwa terkait Covid-19.

Tabel 4 Stastistik deskriptif konsumsi perkapita penduduk Bali

Variabel	Waktu	Mean	Std. Deviation
PCK_1	Sebelum	102.6235	19.5261
	Sesudah	99.0472	17.4320
PCK_2	Sebelum	98.3874	20.1481
	sesudah	91.3621	23.4728
Keterangan: n=7			

Berdasarkan Tabel 4, setelah ditemukan pasien pertama positif Covid-19, konsumsi perkapita penduduk Bali menurun. Setelah penetapan status bencana nasional, konsumsi perkapita penduduk Bali semakin menurun. Artinya penurunan konsumsi perkapita penduduk Bali setelah penetapan status bencana nasional lebih besar daripada sebelumnya. Statistik deskriptif ini menunjukkan bahwa penetapan status bencana nasional berdampak lebih besar terhadap penurunan konsumsi perkapita penduduk Bali dibandingkan peristiwa pengumuman pasien pertama Covid-19.

Tabel 5 menunjukkan hasil uji beda konsumsi perkapita penduduk Bali sebelum dan sesudah peristiwa 1 dan 2.

Tabel 5 Hasil Uji Beda

Variabel	t	Sig. (2-tailed)
DS_1	3.154	0.008**
DS_2	6.638	0.000***
Keterangan: ** signifikan pada α=5%		

Berdasarkan Tabel 5, perbedaan konsumsi perkapita penduduk Bali sebelum dan sesudah pengumuman kasus pertama (peristiwa ke1) Covid-19 signifikan secara statistik, ditunjukkan dengan nilai signifikansi 0,008<0,05. Demikian juga perbedaan konsumsi perkapita sebelum dan sesudah penetapan status bencana nasional (peristiwa ke 2) juga signifikan secara statistik, ditunjukkan dengan nilai signifikansi 0,000<0,05. Hasil ini menunjukkan bahwa pengumuman

bahwa baik peristiwa ke 1 yaitu sejak pengumuman penemuan kasus pertama Covid-19, dan peristiwa ke 2 yaitu penetapan status bencana nasional, berdampak pada penurunan konsumsi perkapita penduduk Bali.

Kesimpulan

Dari seluruh hasil pengujian dapat disimpulkan bahwa pasokan barang konsumsi ke Bali dan konsumsi perkapita penduduk Bali ketika ada wabah Covid-19, berpengaruh signifikan. Terdapat perbedaan pasokan barang konsumsi ke Bali dan konsumsi perkapita penduduk Bali, sebelum dan sesudah peristiwa ke 1 yaitu pengumuman penemuan kasus pertama Covid-19, dan peristiwa ke 2 yaitu penetapan status bencana nasional. Rata-rata pasokan barang konsumsi dan konsumsi perkapita penduduk Bali, menurun setelah peristiwa ke 1 dan kembali menurun setelah adanya peristiwa ke 2.

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Submissions

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41018	**I Wayan Widnyana, Sapta Rini Widyawati** SUPLLY OF CONSUMER GOODS, PER CAPITA CONSUMPTION DUE...	Submission 1	
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4 of 4 submissions

SUPPLY OF CONSUMER GOODS AND PER CAPITA CONSUMPTION IN BALI DUE TO THE COVID-19 PLAGUE

Comment [A1]: Follow the template. Maximum title is 10 words

Abstrak

Wabah Covid-19 yang terjadi sekarang mempengaruhi geliat perekonomian. Penelitian ini bertujuan untuk menguji perubahan pasokan barang-barang konsumsi ke Bali dari luar Bali di wilayah Indonesia dan perubahan konsumsi per kapita penduduk Bali, karena wabah Covid-19. Dua peristiwa diamati, yaitu peristiwa pertama adalah pengumuman kasus positif pasien pertama Covid-19 di Indonesia, dan peristiwa kedua adalah penentuan status bencana nasional oleh pemerintah Indonesia. Analisis data dilakukan dengan menggunakan uji beda dengan program SPSS v.23. Hasil tes menemukan bahwa terjadi perbedaan dalam pasokan barang-barang konsumsi ke Bali dan konsumsi per kapita penduduk Bali pada peristiwa pertama dan peristiwa kedua. Pasokan rata-rata barang konsumsi dan konsumsi per kapita menurun secara signifikan setelah pengumuman kasus positif pertama Covid-19 dan kemudian semakin menurun setelah pemerintah Indonesia menyatakan status bencana nasional.

Abstract

Covid-19 plague that is happening now affects the stretching of the economy. This study aims to examine changes in supply of consumer goods to Bali from outside Bali in Indonesian territory and changes in per capita consumption of Bali population, due to Covid-19 plague. Two events were observed, first event was the announcement of the first positive patient case of Covid-19 in Indonesia, and second event was the determination of status of national disasters by Indonesian government. Data analysis was performed using a different test, with SPSS v.23 program. Test results found that there were differences in the supply of consumer goods to Bali and per capita consumption of Bali population in first event and second event. Average supply of consumer goods and per capita consumption decreased significantly after the announcement of the first positive case of Covid-19 and then it progressively decreases after the Indonesian government declared the status of a national disaster.

Comment [A2]: Show the result and finding

Keywords:

Covid-19, Supply, Consumption, Event Study

INTRODUCTION

The widespread spread of the Covid-19 plague in the world including Indonesia certainly has an impact on the economic stretch. The World Health Organization (WHO) has stated that Corona Virus Disease 2019 (COVID-19) is a pandemic and Indonesia has stated that covid-19 as a non-natural disaster in the form of disease plagues which must be undertaken as an effort to prevent it from increasing cases. Starting since the Indonesian government on March 2, 2020 announced the first 2 confirmed cases of Covid-19 patients in Indonesia, followed later on March 14, 2020 President Jokowi established the Covid-19 container as a national disaster. This situation certainly affects the freedom of movement in various community activities, companies and countries.

Jogiyanto (2012: 392), in signaling theory explained that the information published as an announcement will give a signal to interested parties in decision making. If the announcement contains a positive value, then it is expected that there will be a reaction when the announcement is received by the interested parties. The reaction is shown by a change in activity. Stakeholders first interpret and analyze the information as good news or bad news (Wang & Zhu, 2013). The results of this interpretation of information will later influence decision making, if many interested parties have a pessimistic view due to *bad news* from the information received, then it will reduce its activities. Conversely, if interested parties look optimistic due to *good news* from information received, then he will strengthen his activities (Hu, 2017).

Several studies related to an event have an impact on distribution cooperation (Yu et al., 2001; Zhao et. Al., 2002; Simatupang et al, 2004; Kwon & Suh, 2004), distribution of goods (Ogden, 2006; Prajogo & Olhager, 2012), supply chain performance (Panayides & Lun, 2009; Wu et al. 2014), market reactions (MacKinlay, 1997; Cready & Desert, 2010), consumption behavior (Teppa, 2014), consumption expenditure (Ezeji et al., 2015; Varlamova & Larionova, 2015), household consumption (Tapsin & Aycan, 2014; Ioan, 2015; Mignouna, 2015; Nicklaus, 2015; Varlamova & Larionova, 2015), household consumption (Fikri & Amri, 2014; Leon & Rafael , 2015).

Distribution of goods between islands in Indonesia is a vital activity to be disrupted. Bali, one of the regions in Indonesia, relies heavily on the supply of consumer goods from outside Bali, accounting for more than 70%, mainly supply from Java, has been disrupted because some regions outside of Bali, which have so far been carrying out regional quarantine. The same situation Covid-19 has also reduced the income of Balinese residents and impacted on per capita consumption. Table 1 shows the percentage of supply of consumer goods from outside Bali to Bali and Table 2 shows the level of consumption of Bali's population per capita, during the period December 2019 - March 2020. Table 3 shows the level of consumption per capita of Bali's population over the last five years.

Table 1 Supply of Consumer Goods to Bali from Outside Bali Indonesia December 2019 - March 2020

Month	Supply of consumer goods in Bali (food and non-food)
December 2019	71.35%
January 2020	70.78%
February 2020	65.17%
March 2020	40.62%

Source: Data processed

Table 1 shows the percentage decline continues every month. The biggest decrease occurred in March 2020, which was 40.62%, namely in the month in which Covid-19 cases were discovered in Indonesia and the government established the status of a national disaster. The decrease in March almost doubled from December 2019, indicating that the determination of the status of a national disaster had a significant impact on reducing the supply of consumer goods in Bali.

Table 2 Per capita consumption (food and non food) Bali population December 2019-March 2020

Month	Per capita consumption (food and non food)
December 2019	Rp. 115,681
January 2020	Rp. 112,715
February 2020	Rp. 107,530
March 2020	Rp. 90,379

Source: Data processed

Table 2 shows a decrease in the amount of consumption per capita every month. The biggest decrease occurred in March 2020 compared to February 2020 which was Rp. 17,151. As it is known that in March 2020 the Covid-19 case was first discovered in Indonesia and the government established the status of a national disaster.

Table 3 Per Capita Consumption (food and non food) Bali Population in Year 2015-2019

Years	Per Capita Consumption (food and non food)
2015	Rp. 1,045,145
2016	Rp. 1,099,561
2017	Rp. 1,332,085
2018	Rp. 1,367,032
2019	Rp. 1,387,154

Source: Data processed

Table 3 shows that in normal circumstances there is an increase in per capita consumption of the population of Bali every year from 2015 - 2019.

In this study there are two objectives. The first objective is to examine the effect of the Covid-19 case on the supply of consumer goods in Bali, carried out with the amount of supply of consumer goods to Bali around the event. The second research objective examines the per capita consumption of Balinese residents, carried out by comparing the average per capita consumption before and after the event.

Comment [A3]: Please explain the novelty

RESEARCH METHOD

This research is a quantitative study of an event study, a study that studies the market reaction to an *event* whose information is published as an announcement. Event studies can be used to test the information content of an announcement (MacKinlay, 1997). This research data uses data from Bank Indonesia and the Bali provincial statistics bureau in 2019, then processed according to research needs. Data analysis used a different test with the help of SPSS version 23 (Ghozali, 2105).

*Testing of supply of consumer goods due to the covid-19 plague***.**

An announcement contains of course information, so some related parties will react around the time of the announcement (Cready & Desert, 2010). The reaction

included the supply of consumer goods entering Bali from outside Bali. To find out the reaction is done by testing the difference/ supply gap of consumption goods statistically. The gap in the supply of consumer goods is the difference in supply that occurs due to an event with the consumption supply under normal conditions (Falk & Levy, 2009). If the supply of consumption goods of an event is equal to the supply of normal consumption goods, then there is no gap in the supply of consumption goods or the gap in supply of consumption goods is equal to zero (Sujono, 2016). If the average supply of consumer goods is zero, it means that there is no information content of changes in the supply of consumer goods that occur. The understanding of time around events in this study is from seven days before the event to seven days after the event (Groenwold, 2014).

The calculation of the supply of consumer goods due to an event in this study is formulated in equation (1). Calculation of normal consumption supply using model-adjusted beta, formulated in equation (2). The estimation period is generally the period before the event period. The event period is also called the observation period or event window. Calculation of the supply gap of consumer goods is in equation (3). Calculation of supply of consumer goods due to an event according to equation (1):

$$RDS_t = \frac{DS_t - DS_{t-1}}{DS_{t-1}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where: RDS_t = realization of supply of consumer goods in the t-period, DS_t = supply of consumer goods in the t-period, DS_{t-1} = supply of consumer goods one day before the t-period.

To calculate the supply of normal consumption goods using model-adjusted beta contained in equation (2) with the formula:

$$EDS_t = \alpha + \beta . DS_t + e_t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where: EDS_t = supply of normal consumption goods in the t-estimation period, α = intercept, β = slope coefficient, DS_t = supply of normal consumption goods in the t-period, e_t = residual error in the t-estimation period.

To calculate the gap in the supply of consumer goods is to reduce the supply of consumer goods due to events with a normal supply of consumer goods. The gap in the supply of consumer goods can be calculated by the formula in equation (3):

$$GDS_t = RDSt - EDSt \quad \text{.....} \quad (3)$$

Where : GDS_t = Gap of supply of consumer goods in the t-period, RDS_t = supply of consumer goods due to events in the t-period, EDS_t = supply of normal consumption goods in the t-estimated period.

Testing of per capita consumption to the Covid-19 plague

To answer the public reaction as indicated by consumption per capita because of the announcement of Covid-19. To test whether the Covid-19 plague caused differences in per capita consumption of Bali population before and after the announcement by the government.

In calculating changes in per capita consumption using the formula in equation (4) follows:

$$PCK_t = \frac{CK_t - CK_{t-1}}{CK_{t-1}} \quad \text{.....} \quad (4)$$

Where: PCK_t = Changes in per capita consumption in the t-period, CK_t = per capita consumption in the t-period, CK_{t-1} = per capita consumption one day before the t-period.

RESULT AND DISCUSSION

The result of testing the supply of consumer goods due to the Covid-19 plague

Comment [A4]: Delete sub chapter

Table 1 shows the descriptive statistics of consumption supply to Bali from outside Bali on 1st and 2nd events.

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Table 1. Descriptive Statistics of Supply of Goods Consumption

Day	1st Event		2nd Event	
	Mean	Std. Dev	Mean	Std. Dev
H-7	-0.0106	0.0023	-0.0323	0.0173
H-6	-0.0235	0.0116	-0.0473	0.0176
H-5	0.0002	0.0129	-0.0521	0.0189
H-4	-0.0018	0.0128	0.0001	0.0143
H-3	-0.0165	0.0115	-0.0253	0.0167
H-2	0.0007	0.0093	0.0005	0.0124
H-1	-0.0035	0.0135	-0.0173	0.0172
H0	-0.0015	0.0141		
H+1	-0.0127	0.0187	-0.0431	0.0116
H+2	-0.0235	0.0142	-0.0567	0.0134
H+3	-0.0256	0.0171	-0.0854	0.0143
H+4	-0.0308	0.0182	-0.0721	0.0139
H+5	-0.0323	0.0173	-0.0623	0.0137
H+6	-0.0473	0.0176	-0.0125	0.0139
H+7	-0.0521	0.0189	-0.0104	0.0282
Min	-0.0521		-0.0721	
Max	0.0007		0.0005	

Source: SPSS Analysis (processed)

Comment [A6]: What is the urgency of this table?

Based on Table 1, it can be seen that 2nd event, namely the determination of the status of national disaster, is the momentum of the regional quarantine, so it is considered the zero point of the event date (H0). It was also seen that there was a rather large change in the amount of supply around 1st event and 2nd event.

Table 2 shows the results of the test of the significance of the supply of consumer goods to Bali from outside Bali on the 1st and 2nd.

Table 2 Results of Significance Tests on the Supply of Consumption Goods

Day	1st event			2nd event		
	T	Sig. (2-tailed)	Mean Difference	T	Sig. (2-tailed)	Mean Difference
H-7	0.413	0.652	-0.01037	-0.328	0.681	0.01058
H-6	0.330	0.724	0.01092	-1.301	0.679	0.01146
H-5	0.280	0.723	0.01311	-1.173	0.647	-0.01183
H-4	0.270	0.724	0.01092	-1.569	0.234	-0.01487
H-3	-0.317	0.541	-0.01165	-1.071	0.215	-0.01528
H-2	1.724	0.190	0.01580	-0.119	0.766	-0.01088
H-1	-1.182	0.140	-0.01767	-1.297	0.300	-0.01732

H0	1.471	0.171	0.01708			
H+1	-0.608	0.594	-0.01114	-0.479	0.687	0.01104
H+2	-0.652	0.418	-0.01253	1.012	0.422	0.01576
H+3	0.071	0.778	0.01132	0.475	0.581	0.01238
H+4	0.067	0.778	0.01078	0.455	0.471	0.01024
H+5	-0.428	0.681	0.01058	0.486	0.534	0.01213
H+6	-1.401	0.679	0.01146	0.575	0.550	0.01238
H+7	-1.273	0.647	-0.01183	0.212	0.738	0.01249

Source: SPSS analysis (processed)

Based on Table 2, shows that there is a significant difference in the supply of consumer goods around the date of the first patient announcement Covid- 19 (1st event) and around the date of announcement of the determination of national disaster status (2nd event).

The results of per capita consumption testing due to the Covid-19 plague

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Table 3 shows the results of the normality variable of the Balinese consumption per capita consumption variable.

Table 3. Results of Normality Test Variable

Variables	Time	Kolmogorov-Smirnov		Shapiro-Wilk	
		Statistics	Sig.	Statistics	Sig.
PCK_1	before	0.118	0.116*	0.942	0.632
	after	0.120	0.132*	0.919	0.467
PCK_2	before	0.191	0.200*	0.918	0.452
	After	0.141	0.200*	0.955	0.773
Description: - PCK is per capita consumption - subscripts 1 and 2 declare 1st event and 2nd event					

Source: SPSS analysis (processed)

Based on Table 3 shows the results are entirely insignificant (sig.> 0.05) meaning that the null hypothesis is accepted. Data analyzed were normally distributed. Then the research hypothesis testing uses parametric test that is independent sample t-test.

Table 4 shows descriptive statistics of per capita consumption of Bali population, before and after the two events related to Covid-19.

Table 4. Descriptive statistics per capita consumption of Bali population

Variable	Time	Mean	Std. Deviation
PCK_1	Before	102.6235	19.5261
	After	99.0472	17.4320
PCK_2	Before	98.3874	20.1481
	after	91.3621	23.4728
Note: n = 7			

Source: SPSS analysis (processed)

Based on Table 4, after finding the first positive patient of Covid-19, per capita consumption of Bali population decreased. After determining the status of a national disaster, per capita consumption has declined. This means that the decline in per capita consumption of the population of Bali after determining the status of national disaster is greater than before. This descriptive statistic shows that the determination of the status of a national disaster has a greater impact on the decrease in per capita consumption of the population of Bali than the events of the announcement of the first patient Covid-19.

Table 5 shows the results of different test per capita consumption of Bali's population before and after 1st and 2nd event.

Table 5. Different Test Results

Variable	T	Sig. (2-tailed)
DS_1	3,154	0.008 **
DS_2	6,638	0,000 ***
Note: ** significant at α = 5%		

Source: SPSS analysis (processed)

Based on Table 5, differences in per capita consumption of Bali population before and after the announcement of the first case (1st event) Covid-19 statistically significant, indicated by the significance value 0.008 < 0.05. Likewise, the difference in per capita consumption before and after the determination of the national disaster status (2nd event) was also statistically significant, indicated by a significance value of 0.000 < 0.05. These results indicate that the announcement that both the 1st event since the announcement of the discovery of the first case of Covid-19, and the 2nd

event, namely the determination of the status of a national disaster, had an impact on the decline in consumption per capita of the population of Bali.

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CONCLUSION

From the whole test results it can be concluded that the supply of consumer goods to Bali and the per capita consumption of Bali population when there was an plague of Covid-19, had a significant effect. There is a difference in the supply of consumer goods to Bali and the per capita consumption of Balinese population, before and after the 1st event, namely the announcement of the discovery of the first case of Covid-19, and the 2nd event, namely the determination of the status of a national disaster. The average supply of consumer goods and per capita consumption of the Balinese population declined after the 1st event and declined again after the 2nd event.

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Comment [A9]: Please check, 80% of references must be ajournal or proceeding

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CONSUMER GOODS SUPPLY, PER CAPITA CONSUMPTION DUE TO COVID-19 PANDEMIC

Comment [ya1]: Change to " Pandemic "

Comment [ya2]: the title is more than 10 words

Abstrak

Wabah Covid-19 yang terjadi sekarang mempengaruhi geliat perekonomian. Penelitian ini bertujuan untuk menguji perubahan pasokan barang-barang konsumsi ke Bali dari luar Bali di wilayah Indonesia dan perubahan konsumsi per kapita penduduk Bali, karena wabah Covid-19. Dua peristiwa diamati, yaitu peristiwa pertama adalah pengumuman kasus positif pasien pertama Covid-19 di Indonesia, dan peristiwa kedua adalah penentuan status bencana nasional oleh pemerintah Indonesia. Analisis data dilakukan dengan menggunakan uji beda dengan program SPSS v.23. Hasil tes menemukan bahwa terjadi perbedaan dalam pasokan barang-barang konsumsi ke Bali dan konsumsi per kapita penduduk Bali pada peristiwa pertama dan peristiwa kedua. Pasokan rata-rata barang konsumsi dan konsumsi per kapita menurun secara signifikan setelah pengumuman kasus positif pertama Covid-19 dan kemudian semakin menurun setelah pemerintah Indonesia menyatakan status bencana nasional.

terdapat perbedaan pasokan barang konsumsi yang signifikan di sekitar tanggal pengumuman pasien pertama Covid-19 (peristiwa ke 1) dan di sekitar tanggal pengumuman penetapan status bencana nasional (peristiwa ke 2).

Setelah penetapan status bencana nasional, konsumsi perkapita penduduk Bali semakin menurun. Artinya penurunan konsumsi perkapita penduduk Bali setelah penetapan status bencana nasional lebih besar daripada sebelumnya. Statistik deskriptif ini menunjukkan bahwa penetapan status bencana nasional berdampak lebih besar terhadap penurunan konsumsi perkapita penduduk Bali dibandingkan peristiwa pengumuman pasien pertama Covid-19.

Hasil ini menunjukkan bahwa pengumuman bahwa baik peristiwa ke 1 yaitu sejak pengumuman penemuan kasus pertama Covid-19, dan peristiwa ke 2 yaitu penetapan status bencana nasional, berdampak pada penurunan konsumsi perkapita penduduk Bali.

Abstract

Covid-19 pandemic that is happening now affects the stretching of the economy. This study aims to examine changes in supply of consumer goods to Bali from outside Bali in Indonesian territory and changes in per capita consumption of Bali population, due to Covid-19 pandemic. Two events were observed, first event was the announcement of the first positive patient case of Covid-19 in Indonesia, and second event was the determination of status of national disasters by Indonesian government. Data analysis was performed using a different test, with SPSS v.23 program. Test results found that there were differences in the supply of consumer goods to Bali and per capita consumption of Bali population in first event and second event. Average supply of consumer goods and per capita consumption decreased significantly after the announcement of the first positive case of Covid-19 and then it

progressively decreases after the Indonesian government declared the status of a national disaster.

Keywords:
Covid-19, Supply, Consumption, Event Study

INTRODUCTION

The widespread spread of the Covid-19 pandemic in the world including Indonesia certainly has an impact on the economic stretch. The World Health Organization (WHO) has stated that Corona Virus Disease 2019 (COVID-19) is a pandemic and Indonesia has stated that covid-19 as a non-natural disaster in the form of disease pandemics which must be undertaken as an effort to prevent it from increasing cases. Starting since the Indonesian government on March 2, 2020 announced the first 2 confirmed cases of Covid-19 patients in Indonesia, followed later on March 14, 2020 President Jokowi established the Covid-19 container as a national disaster. This situation certainly affects the freedom of movement in various community activities, companies and countries.

Jogiyanto (2012: 392), in signaling theory explained that the information published as an announcement will give a signal to interested parties in decision making. If the announcement contains a positive value, then it is expected that there will be a reaction when the announcement is received by the interested parties. The reaction is shown by a change in activity. Stakeholders first interpret and analyze the information as good news or bad news (Wang & Zhu, 2013). The results of this interpretation of information will later influence decision making, if many interested parties have a pessimistic view due to *bad news* from the information received, then it will reduce its activities. Conversely, if interested parties look optimistic due to *good news* from information received, then he will strengthen his activities (Hu, 2017).

Several studies related to an event have an impact on distribution cooperation (Yu et al., 2001; Zhao et. Al., 2002; Simatupang et al, 2004; Kwon & Suh, 2004), distribution of goods (Ogden, 2006; Prajogo & Olhager, 2012), supply chain performance (Panayides & Lun, 2009; Wu et al. 2014), market reactions (MacKinlay, 1997; Cready & Desert, 2010), consumption behavior (Teppa, 2014), consumption

expenditure (Ezeji et al., 2015; Varlamova & Larionova, 2015), household consumption (Tapsin & Aycan, 2014; Ioan, 2015; Mignouna, 2015; Nicklaus, 2015; Varlamova & Larionova, 2015), household consumption (Fikri & Amri, 2014; Leon & Rafael , 2015).

Distribution of goods between islands in Indonesia is a vital activity to be disrupted. Bali, one of the regions in Indonesia, relies heavily on the supply of consumer goods from outside Bali, accounting for more than 70%, mainly supply from Java, has been disrupted because some regions outside of Bali, which have so far been carrying out regional quarantine. The same situation Covid-19 has also reduced the income of Balinese residents and impacted on per capita consumption. Table 1 shows the percentage of supply of consumer goods from outside Bali to Bali and Table 2 shows the level of consumption of Bali's population per capita, during the period December 2019 - March 2020. Table 3 shows the level of consumption per capita of Bali's population over the last five years.

Table 1 Supply of Consumer Goods to Bali from Outside Bali Indonesia December 2019 - March 2020

Month	Supply of consumer goods in Bali (food and non-food)
December 2019	71.35%
January 2020	70.78%
February 2020	65.17%
March 2020	40.62%

Source: Data processed

Table 1 shows the percentage decline continues every month. The biggest decrease occurred in March 2020, which was 40.62%, namely in the month in which Covid-19 cases were discovered in Indonesia and the government established the status of a national disaster. The decrease in March almost doubled from December 2019, indicating that the determination of the status of a national disaster had a significant impact on reducing the supply of consumer goods in Bali.

Table 2 Per capita consumption (food and non food) Bali population December 2019-March 2020

Month	Per capita consumption (food and non food)

December 2019	Rp. 115,681
January 2020	Rp. 112,715
February 2020	Rp. 107,530
March 2020	Rp. 90,379

Source: Data processed

Table 2 shows a decrease in the amount of consumption per capita every month. The biggest decrease occurred in March 2020 compared to February 2020 which was Rp. 17,151. As it is known that in March 2020 the Covid-19 case was first discovered in Indonesia and the government established the status of a national disaster.

Table 3 Per Capita Consumption (food and non food) Bali Population in Year 2015-2019

Years	Per Capita Consumption (food and non food)
2015	Rp. 1,045,145
2016	Rp. 1,099,561
2017	Rp. 1,332,085
2018	Rp. 1,367,032
2019	Rp. 1,387,154

Source: Data processed

Table 3 shows that in normal circumstances there is an increase in per capita consumption of the population of Bali every year from 2015 - 2019.

In this study there are two objectives. The first objective is to examine the effect of the Covid-19 case on the supply of consumer goods in Bali, carried out with the amount of supply of consumer goods to Bali around the event. The second research objective examines the per capita consumption of Balinese residents, carried out by comparing the average per capita consumption before and after the event.

Penelitian ini berbeda dengan penelitian lainnya karena menganalisis keputusan yang diambil oleh pemasok barang konsumsi dan konsumsi per kapita pada dua peristiwa sekaligus. Penelitian lain hanya menganalisis sesudah dan sebelum pada satu peristiwa.

RESEARCH METHOD

This research is a quantitative study of an event study, a study that studies the market reaction to an *event* whose information is published as an announcement.

Event studies can be used to test the information content of an announcement (MacKinlay, 1997). This research data uses data from Bank Indonesia and the Bali provincial statistics bureau in 2019, then processed according to research needs. Data analysis used a different test with the help of SPSS version 23 (Ghozali, 2105).

*Testing of supply of consumer goods due to the covid-19 pandemic***.**

An announcement contains of course information, so some related parties will react around the time of the announcement (Cready & Desert, 2010). The reaction included the supply of consumer goods entering Bali from outside Bali. To find out the reaction is done by testing the difference/ supply gap of consumption goods statistically. The gap in the supply of consumer goods is the difference in supply that occurs due to an event with the consumption supply under normal conditions (Falk & Levy, 2009). If the supply of consumption goods of an event is equal to the supply of normal consumption goods, then there is no gap in the supply of consumption goods or the gap in supply of consumption goods is equal to zero (Sujono, 2016). If the average supply of consumer goods is zero, it means that there is no information content of changes in the supply of consumer goods that occur. The understanding of time around events in this study is from seven days before the event to seven days after the event (Groenwold, 2014).

The calculation of the supply of consumer goods due to an event in this study is formulated in equation (1). Calculation of normal consumption supply using model-adjusted beta, formulated in equation (2). The estimation period is generally the period before the event period. The event period is also called the observation period or event window. Calculation of the supply gap of consumer goods is in equation (3). Calculation of supply of consumer goods due to an event according to equation (1):

$$RDS_t = \frac{DS_t - DS_{t-1}}{DS_{t-1}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where: RDS_t = realization of supply of consumer goods in the t-period, DS_{t} = supply of consumer goods in the t-period, DS_{t-1} = supply of consumer goods one day before the t-period.

To calculate the supply of normal consumption goods using model-adjusted beta contained in equation (2) with the formula:

$$EDS_t = \alpha + \beta.DS_t + e_t \quad \text{.....} \quad (2)$$

Where: EDS_t = supply of normal consumption goods in the t-estimation period, α = intercept, β = slope coefficient, DS_t = supply of normal consumption goods in the t-period, e_t = residual error in the t-estimation period.

To calculate the gap in the supply of consumer goods is to reduce the supply of consumer goods due to events with a normal supply of consumer goods. The gap in the supply of consumer goods can be calculated by the formula in equation (3):

$$GDS_t = RDSt - EDSt \quad \text{…….....} \quad (3)$$

Where : GDS_t = Gap of supply of consumer goods in the t-period, RDS_t = supply of consumer goods due to events in the t-period, EDS_t = supply of normal consumption goods in the t-estimated period.

Testing of per capita consumption to the Covid-19 pandemic

To answer the public reaction as indicated by consumption per capita because of the announcement of Covid-19. To test whether the Covid-19 pandemic caused differences in per capita consumption of Bali population before and after the announcement by the government.

In calculating changes in per capita consumption using the formula in equation (4) follows:

$$PCK_t = \frac{CK_t - CK_{t-1}}{CK_{t-1}} \quad \text{……..……} \quad (4)$$

Where: PCK_t = Changes in per capita consumption in the t-period, CK_t = per capita consumption in the t-period, CK_{t-1} = per capita consumption one day before the t-period.

RESULT AND DISCUSSION

Comment [ya3]: result and discussion is minimum 50 % of total pages of paper , add many explanations

Untuk mengetahui rata-rata pasokan barang konsumsi ke Bali dari luar Bali pada peristiwa 1 yaitu sejak pemerintah Indonesia mengumumkan 2 orang pasien

kasus Covid-19 pertama yang terkonfirmasi di Indonesia pada 2 Maret 2020 dan pada peristiwa ke 2, yaitu ketika Presiden Jokowi menetapkan Covid-19 sebagai bencana nasional pada 14 Maret 2020.

Table 1 shows the descriptive statistics of supply of goods consumption to Bali from outside Bali on 1st and 2nd events.

Table 1. Descriptive Statistics of Supply of Goods Consumption

Day	1st Event		2nd Event	
	Mean	Std. Dev	Mean	Std. Dev
H-7	-0.0106	0.0023	-0.0323	0.0173
H-6	-0.0235	0.0116	-0.0473	0.0176
H-5	0.0002	0.0129	-0.0521	0.0189
H-4	-0.0018	0.0128	0.0001	0.0143
H-3	-0.0165	0.0115	-0.0253	0.0167
H-2	0.0007	0.0093	0.0005	0.0124
H-1	-0.0035	0.0135	-0.0173	0.0172
H0	-0.0015	0.0141		
H+1	-0.0127	0.0187	-0.0431	0.0116
H+2	-0.0235	0.0142	-0.0567	0.0134
H+3	-0.0256	0.0171	-0.0854	0.0143
H+4	-0.0308	0.0182	-0.0721	0.0139
H+5	-0.0323	0.0173	-0.0623	0.0137
H+6	-0.0473	0.0176	-0.0125	0.0139
H+7	-0.0521	0.0189	-0.0104	0.0282
Min	-0.0521		-0.0721	
Max	0.0007		0.0005	

Source: SPSS Analysis (processed)

Berdasarkan Tabel 1 terlihat bahwa peristiwa 2 yaitu penetapan status bencana nasional menjadi momentum karantika wilayah, sehingga dianggap titik nol tanggal peristiwa (H0). Terlihat juga bahwa terjadi perubahan jumlah pasokan barang konsumsi ke Bali dari luar Bali yang agak besar di sekitar peristiwa 1, yaitu ketika pemerintah Indonesia mengumumkan 2 orang pasien kasus Covid-19 pertama yang terkonfirmasi di Indonesia pada 2 Maret 2020 dan di sekitar peristiwa 2, yaitu Presiden Jokowi menetapkan Covid-19 sebagai bencana nasional pada 14 Maret 2020.

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Table 2 shows the results of the test of the significance of the supply of consumer goods to Bali from outside Bali on the 1st and 2nd.

Table 2 Results of Significance Tests on the Supply of Consumption Goods

Day	1st event			2nd event		
	T	Sig. (2-tailed)	Mean Difference	T	Sig. (2-tailed)	Mean Difference
H-7	0.413	0.652	-0.01037	-0.328	0.681	0.01058
H-6	0.330	0.724	0.01092	-1.301	0.679	0.01146
H-5	0.280	0.723	0.01311	-1.173	0.647	-0.01183
H-4	0.270	0.724	0.01092	-1.569	0.234	-0.01487
H-3	-0.317	0.541	-0.01165	-1.071	0.215	-0.01528
H-2	1.724	0.190	0.01580	-0.119	0.766	-0.01088
H-1	-1.182	0.140	-0.01767	-1.297	0.300	-0.01732
H0	1.471	0.171	0.01708			
H+1	-0.608	0.594	-0.01114	-0.479	0.687	0.01104
H+2	-0.652	0.418	-0.01253	1.012	0.422	0.01576
H+3	0.071	0.778	0.01132	0.475	0.581	0.01238
H+4	0.067	0.778	0.01078	0.455	0.471	0.01024
H+5	-0.428	0.681	0.01058	0.486	0.534	0.01213
H+6	-1.401	0.679	0.01146	0.575	0.550	0.01238
H+7	-1.273	0.647	-0.01183	0.212	0.738	0.01249

Source: SPSS analysis (processed)

Based on Table 2, shows that there is a significant difference in the supply of consumer goods around the date of the first patient announcement Covid- 19 (1st event) and around the date of announcement of the determination of national disaster status (2nd event).

Hasil penelitian ini sesuai pandangan signaling theory, bahwa terdapat sinyal bagi pihak yang mengambil keputusan yaitu pemasok barang konsumsi atas informasi yang dipublikasikan sebagai suatu pengumuman yang mengandung bad news pada kedua peristiwa. Sehingga dari informasi tersebut berdampak nyata terhadap penurunan pasokan barang konsumsi dari luar Bali ke Bali. Hasil penelitian sejalan dengan hasil penelitian Ogden (2006), Prajogo & Olhager (2012) yang menemukan bahwa suatu peristiwa berdampak terhadap distribusi barang.

Table 3 shows the results of the normality variable of the Balinese consumption per capita consumption variable.

Table 3. Results of Normality Test Variable

Variables	Time	Kolmogorov-Smirnov		Shapiro-Wilk	
		Statistics	Sig.	Statistics	Sig.
PCK_1	before	0.118	0.116*	0.942	0.632
	after	0.120	0.132*	0.919	0.467
PCK_2	before	0.191	0.200*	0.918	0.452
	After	0.141	0.200*	0.955	0.773
Description: - PCK is per capita consumption - subscripts 1 and 2 declare 1st event and 2nd event					

Source: SPSS analysis (processed)

Based on Table 3 shows the results are entirely insignificant (sig.> 0.05) meaning that the null hypothesis is accepted. Data analyzed were normally distributed. Then the research hypothesis testing uses parametric test that is independent sample t-test.

Table 4 shows descriptive statistics of per capita consumption of Bali population, before and after the two events related to Covid-19.

Table 4. Descriptive statistics per capita consumption of Bali population

Variable	Time	Mean	Std. Deviation
PCK_1	Before	102.6235	19.5261
	After	99.0472	17.4320
PCK_2	Before	98.3874	20.1481
	after	91.3621	23.4728
Note: n = 7			

Source: SPSS analysis (processed)

Based on Table 4, after finding the first positive patient of Covid-19, per capita consumption of Bali population decreased. After determining the status of a national disaster, per capita consumption has declined. This means that the decline in per capita consumption of the population of Bali after determining the status of national disaster is greater than before. This descriptive statistic shows that the determination of the status of a national disaster has a greater impact on the decrease in per capita

consumption of the population of Bali than the events of the announcement of the first patient Covid-19.

Pada peristiwa ke 1 memiliki dampak lebih besar daripada peristiwa ke 2, karena pada peristiwa ke 2 pemerintah semakin memperluas karantina wilayah karena pandemic Covid-19. Akibatnya banyak perusahaan menutup usahanya, merumahkan dan memberhentikan karyawannya. Terjadi penurunan pendapatan masyarakat, akibatnya konsumsi per kapita setelah peristiwa ke 2 semakin menurun.

Table 5 shows the results of different test per capita consumption of Bali's population before and after 1st and 2nd event.

Table 5. Different Test Results

Variable	t	Sig. (2-tailed)
DS_1	3,154	0.008 **
DS_2	6,638	0,000 ***
Note: ** significant at α = 5%		

Source: SPSS analysis (processed)

Based on Table 5, differences in per capita consumption of Bali population before and after the announcement of the first case (1st event) Covid-19 statistically significant, indicated by the significance value 0.008 < 0.05. Likewise, the difference in per capita consumption before and after the determination of the national disaster status (2nd event) was also statistically significant, indicated by a significance value of 0.000 < 0.05. These results indicate that the announcement that both the 1st event since the announcement of the discovery of the first case of Covid-19, and the 2nd event, namely the determination of the status of a national disaster, had a significant impact on the decline in consumption per capita of the population of Bali.

Hasil penelitian sejalan dengan hasil penelitian Fikri & Amri (2014), Leon & Rafael (2015) yang menemukan bahwa suatu peristiwa berdampak terhadap konsumsi masyarakat

CONCLUSION

Dari seluruh hasil pengujian dapat disimpulkan bahwa pasokan barang konsumsi ke Bali dan konsumsi perkapita penduduk Bali ketika ada pandemic Covid-19, berpengaruh signifikan. Terdapat perbedaan yang signifikan pada pasokan barang konsumsi ke Bali dan konsumsi perkapita penduduk Bali, sebelum dan sesudah

peristiwa ke 1 yaitu pengumuman penemuan kasus pertama Covid-19, dan peristiwa ke 2 yaitu penetapan status bencana nasional. Rata-rata pasokan barang konsumsi dan konsumsi perkapita penduduk Bali, menurun setelah peristiwa ke 1 dan kembali menurun setelah adanya peristiwa ke 2.

Hasil penelitian ini sesuai pandangan signaling theory bahwa terdapat sinyal bagi pihak yang mengambil keputusan yaitu pemasok barang konsumsi dan konsumsi masyarakat atas pengumuman yang mengandung bad news pada kedua peristiwa. Akibat dari informasi tersebut terjadi penuruanan yang signifikan terhadap pasokan barang konsumsi dari luar Bali ke Bali dan konsumsi perkapita penduduk Bali.

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SUPLLY OF CONSUMER GOODS, PER CAPITA CONSUMPTION DUE TO COVID-19 PANDEMIC

Abstrak

Pandemik Covid-19 yang terjadi sekarang mempengaruhi geliat perekonomian. Penelitian ini bertujuan untuk menguji perubahan pasokan barang-barang konsumsi ke Bali dari luar Bali di wilayah Indonesia dan perubahan konsumsi per kapita penduduk Bali, karena pandemik Covid-19. Dua peristiwa diamati, yaitu peristiwa pertama adalah pengumuman kasus positif pasien pertama Covid-19 di Indonesia, dan peristiwa kedua adalah penentuan status bencana nasional oleh pemerintah Indonesia. Analisis data dilakukan dengan menggunakan uji beda dengan program SPSS v.23. Hasil analisis menemukan bahwa terjadi perbedaan dalam pasokan barang konsumsi ke Bali dari luar Bali dan konsumsi per kapita penduduk Bali pada peristiwa pertama dan peristiwa kedua. Pasokan barang konsumsi dan konsumsi per kapita menurun secara signifikan setelah pengumuman kasus positif pertama Covid-19 dan kemudian semakin menurun setelah pemerintah Indonesia menyatakan status bencana nasional. Penetapan status bencana nasional berdampak lebih besar terhadap penurunan konsumsi per kapita penduduk Bali dibandingkan peristiwa pengumuman pasien pertama Covid-19. Akibat Covid-19, diharapkan Pemerintah Provinsi Bali perlu membuat terobosan kebijakan guna mendorong pemenuhan kebutuhan barang konsumsi di Bali secara mandiri agar tidak selalu tergantung pada pasokan dari luar Bali. Adanya pandemic Covid-19 menurunkan pendapatan dan mengurangi daya beli, sehingga menuntut masyarakat untuk lebih cerdas dalam perencanaan keuangan, utamanya mengatur pola konsumsi.

Abstract

The Covid-19 pandemic that is happening now is affecting the economy. This study aims to examine changes in the supply of consumer goods to Bali from outside Bali in the Indonesian territory and changes in the per capita consumption of the Balinese population, due to the Covid-19 pandemic. Two events were observed, namely the first event was the announcement of the first positive case of Covid-19 in Indonesia, and the second event was the determination of the status of a national disaster by the Indonesian government. Data analysis was performed using a different test with the SPSS v.23 program. The results of the analysis found that there was a difference in the supply of consumer goods to Bali from outside Bali and the per capita consumption of the Balinese population in the first and second events. The supply of consumer goods and per capita consumption decreased significantly after the announcement of the first positive case of Covid-19 and then further decreased after the Indonesian government declared a national disaster status. The determination of the status of a national disaster has a greater impact on reducing the per capita consumption of the Balinese population than the announcement of the first Covid-19 patient. As a result of Covid-19, it is hoped that the Bali Provincial Government needs to make policy breakthroughs to encourage the fulfillment of consumer goods needs in Bali independently so that they do not always depend on supplies from outside Bali. The Covid-19 pandemic has reduced people's income and reduced purchasing power, thus demanding people to be smarter in financial planning, especially in regulating consumption patterns.

Keywords:

Covid-19, Supply, Consumption, Event Study

INTRODUCTION

The widespread spread of the Covid-19 pandemic in the world including Indonesia certainly has an impact on the economic stretch. The World Health Organization (WHO) has stated that Corona Virus Disease 2019 (COVID-19) is a pandemic and Indonesia has stated that covid-19 as a non-natural disaster in the form of disease pandemics which must be undertaken as an effort to prevent it from increasing cases. Starting since the Indonesian government on March 2, 2020 announced the first 2 confirmed cases of Covid-19 patients in Indonesia, followed later on March 14, 2020 President Jokowi established the Covid-19 container as a national disaster. This situation certainly affects the freedom of movement in various community activities, companies and countries.

Jogiyanto (2012: 392), in signaling theory explained that the information published as an announcement will give a signal to interested parties in decision making. If the announcement contains a positive value, then it is expected that there will be a reaction when the announcement is received by the interested parties. The reaction is shown by a change in activity. Stakeholders first interpret and analyze the information as good news or bad news (Wang & Zhu, 2013). The results of this interpretation of information will later influence decision making, if many interested parties have a pessimistic view due to *bad news* from the information received, then it will reduce its activities. Conversely, if interested parties look optimistic due to *good news* from information received, then he will strengthen his activities (Hu, 2017).

Several studies related to an event have an impact on distribution cooperation (Yu et al., 2001; Zhao et. Al., 2002; Simatupang et al, 2004; Kwon & Suh, 2004), distribution of goods (Ogden, 2006; Prajogo & Olhager, 2012), supply chain performance (Panayides & Lun, 2009; Wu et al. 2014), market reactions (MacKinlay, 1997; Cready & Desert, 2010), consumption behavior (Teppa, 2014), consumption expenditure (Ezeji et al., 2015; Varlamova & Larionova, 2015), household consumption (Tapsin & Aycan, 2014; Ioan, 2015; Mignouna, 2015; Nicklaus, 2015; Varlamova & Larionova, 2015), household consumption (Fikri & Amri, 2014; Leon & Rafael , 2015).

Distribution of goods between islands in Indonesia is a vital activity to be disrupted. Bali, one of the regions in Indonesia, relies heavily on the supply of consumer goods from outside Bali, accounting for more than 70%, mainly supply from Java, has been disrupted because some regions outside of Bali, which have so far been carrying out regional quarantine. The same situation Covid-19 has also reduced the income of Balinese residents and impacted on per capita consumption. Table 1 shows the percentage of supply of consumer goods from outside Bali to Bali and Table 2 shows the level of per capita consumption of Bali population, during the period December 2019 - March 2020. Table 3 shows the level of per capita consumption of Bali population over the last five years.

Table 1 Supply of Consumer Goods to Bali from Outside Bali Indonesia December 2019 - March 2020

Month	Supply of consumer goods in Bali (food and non-food)
December 2019	71.35%
January 2020	70.78%
February 2020	65.17%
March 2020	40.62%

Source: Data processed

Table 1 shows the percentage decline continues every month. The biggest decrease occurred in March 2020, which was 40.62%, namely in the month in which Covid-19 cases were discovered in Indonesia and the government established the status of a national disaster. The decrease in March almost doubled from December 2019, indicating that the determination of the status of a national disaster had a significant impact on reducing the supply of consumer goods in Bali.

Table 2 Per capita consumption (food and non-food) of Bali population December 2019-March 2020

Month	Per capita consumption (food and non-food)
December 2019	Rp. 115,681
January 2020	Rp. 112,715
February 2020	Rp. 107,530
March 2020	Rp. 90,379

Source: Data processed

Table 2 shows a decrease in the amount of consumption per capita every month. The biggest decrease occurred in March 2020 compared to February 2020 which was

Rp. 17,151. As it is known that in March 2020 the Covid-19 case was first discovered in Indonesia and the government established the status of a national disaster.

Table 3 Per Capita Consumption (food and non-food) Bali Population in Year 2015-2019

Years	Per Capita Consumption (food and non-food)
2015	Rp. 1,045,145
2016	Rp. 1,099,561
2017	Rp. 1,332,085
2018	Rp. 1,367,032
2019	Rp. 1,387,154

Source: Data processed

Table 3 shows that in normal circumstances there is an increase in per capita consumption of the population of Bali every year from 2015 - 2019.

In this study there are two objectives. The first objective is to examine the effect of the Covid-19 case on the supply of consumer goods in Bali, carried out with the amount of supply of consumer goods to Bali around the event. The second research objective examines the per capita consumption of Bali population, carried out by comparing the average per capita consumption before and after the event.

This study differs from other studies in that it analyzes the decisions taken by suppliers of consumer goods and per capita consumption on two events at once. Other studies only analyze after and before an event.

RESEARCH METHOD

This research is a quantitative study of an event study, a study that studies the market reaction to an *event* whose information is published as an announcement. Event studies can be used to test the information content of an announcement (MacKinlay, 1997). This research data uses data from Bank Indonesia and the Bali provincial statistics bureau in 2019, then processed according to research needs. Data analysis used a different test with the help of SPSS version 23 (Ghozali, 2105).

*Testing of supply of consumer goods due to the covid-19 pandemic***.**

An announcement contains of course information, so some related parties will react around the time of the announcement (Cready & Desert, 2010). The reaction included the supply of consumer goods entering Bali from outside Bali. To find out

the reaction is done by testing the difference/ supply gap of consumption goods statistically. The gap in the supply of consumer goods is the difference in supply that occurs due to an event with the consumption supply under normal conditions (Falk & Levy, 2009). If the supply of consumption goods of an event is equal to the supply of normal consumption goods, then there is no gap in the supply of consumption goods or the gap in supply of consumption goods is equal to zero (Sujono, 2016). If the average supply of consumer goods is zero, it means that there is no information content of changes in the supply of consumer goods that occur. The understanding of time around events in this study is from seven days before the event to seven days after the event (Groenwold, 2014).

The calculation of the supply of consumer goods due to an event in this study is formulated in equation (1). Calculation of normal consumption supply using model-adjusted beta, formulated in equation (2). The estimation period is generally the period before the event period. The event period is also called the observation period or event window. Calculation of the supply gap of consumer goods is in equation (3).
Calculation of supply of consumer goods due to an event according to equation (1):

$$RDS_t = \frac{DS_t - DS_{t-1}}{DS_{t-1}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where: RDS_t = realization of supply of consumer goods in the t-period, DS_t = supply of consumer goods in the t-period, DS_{t-1} = supply of consumer goods one day before the t-period.

To calculate the supply of consumer goods normally using model-adjusted beta contained in equation (2) with the formula:

$$EDS_t = \alpha + \beta . DS_t + e_t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where: EDS_t = supply of consumer goods normally in the t-estimation period, α = intercept, β = slope coefficient, DS_t = supply of consumer goods normally in the t-period, e_t = residual error in the t-estimation period.

To calculate the gap in the supply of consumer goods is to reduce the supply of consumer goods due to events with a normal supply of consumer goods. The gap in the supply of consumer goods can be calculated by the formula in equation (3):

$$GDS_t = RDSt - EDSt \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3)$$

Where : GDS_t = Gap of supply of consumer goods in the t-period, RDS_t = supply of consumer goods due to events in the t-period, EDS_t = supply of normal consumption goods in the t-estimated period.

Testing of per capita consumption to the Covid-19 pandemic

To answer the public reaction as indicated by per capita consumption because of the announcement of Covid-19. To test whether the Covid-19 pandemic caused differences in per capita consumption of Bali population before and after the announcement by the government.

In calculating changes in per capita consumption using the formula in equation (4) follows:

$$PCK_t = \frac{CK_t - CK_{t-1}}{CK_{t-1}} \quad \ldots\ldots (4)$$

Where: PCK_t = Changes in per capita consumption in the t-period, CK_t = per capita consumption in the t-period, CK_{t-1} = per capita consumption one day before the t-period.

RESULT AND DISCUSSION

To find out the average supply of consumer goods to Bali from outside Bali on 1st 1st event, namely since the Indonesian government announced the first 2 confirmed Covid-19 cases in Indonesia on March 2, 2020 and on 2nd event, namely after President Jokowi declared Covid- 19 as a national disaster on March 14, 2020.

Table 1 shows the descriptive statistics of supply of consumer goods to Bali from outside Bali on 1st and 2nd events.

Table 1. Descriptive Statistics of Supply of Consumer Goods

Day	1st Event		2nd Event	
	Mean	Std. Dev	Mean	Std. Dev
H-7	-0.0106	0.0023	-0.0323	0.0173
H-6	-0.0235	0.0116	-0.0473	0.0176
H-5	0.0002	0.0129	-0.0521	0.0189
H-4	-0.0018	0.0128	0.0001	0.0143
H-3	-0.0165	0.0115	-0.0253	0.0167
H-2	0.0007	0.0093	0.0005	0.0124
H-1	-0.0035	0.0135	-0.0173	0.0172
H0	-0.0015	0.0141		

H+1	-0.0127	0.0187	-0.0431	0.0116
H+2	-0.0235	0.0142	-0.0567	0.0134
H+3	-0.0256	0.0171	-0.0854	0.0143
H+4	-0.0308	0.0182	-0.0721	0.0139
H+5	-0.0323	0.0173	-0.0623	0.0137
H+6	-0.0473	0.0176	-0.0125	0.0139
H+7	-0.0521	0.0189	-0.0104	0.0282
Min	-0.0521		-0.0721	
Max	0.0007		0.0005	

Based on Table 1, it can be seen that the 2nd event, namely the determination of the status of a national disaster, becomes the momentum of regional quarantine, so that it is considered the zero point of the event date (H0). It can also be seen that there has been a rather large change in the supply of consumer goods to Bali from outside Bali around 1st event, namely when the Indonesian government announced the first 2 confirmed cases of Covid-19 in Indonesia on March 2, 2020 and around 2nd event, namely President Jokowi declared Covid- 19 as a national disaster on March 14, 2020.

Table 2 shows the results of the test of the significance of the supply of consumer goods to Bali from outside Bali on the 1st and 2nd.

Table 2. Results of Significance Tests on the Supply of Consumer Goods

Day	1st event			2nd event		
	T	Sig. (2-tailed)	Mean Difference	T	Sig. (2-tailed)	Mean Difference
H-7	0.413	0.652	-0.01037	-0.328	0.681	0.01058
H-6	0.330	0.724	0.01092	-1.301	0.679	0.01146
H-5	0.280	0.723	0.01311	-1.173	0.647	-0.01183
H-4	0.270	0.724	0.01092	-1.569	0.234	-0.01487
H-3	-0.317	0.541	-0.01165	-1.071	0.215	-0.01528
H-2	1.724	0.190	0.01580	-0.119	0.766	-0.01088
H-1	-1.182	0.140	-0.01767	-1.297	0.300	-0.01732
H0	1.471	0.171	0.01708			
H+1	-0.608	0.594	-0.01114	-0.479	0.687	0.01104
H+2	-0.652	0.418	-0.01253	1.012	0.422	0.01576
H+3	0.071	0.778	0.01132	0.475	0.581	0.01238
H+4	0.067	0.778	0.01078	0.455	0.471	0.01024
H+5	-0.428	0.681	0.01058	0.486	0.534	0.01213
H+6	-1.401	0.679	0.01146	0.575	0.550	0.01238
H+7	-1.273	0.647	-0.01183	0.212	0.738	0.01249

Based on Table 2, shows that there is a significant difference in the supply of consumer goods around the date of the first patient announcement Covid- 19 (1st event) and around the date of announcement of the determination of national disaster status (2nd event).

The results of this study are in accordance with the signaling theory view, that there is a signal for those who make decisions, namely the supplier of consumer goods for information published as an announcement containing bad news on both events. So that the information has a real impact on the decline in the supply of consumer goods from outside Bali to Bali. The results of the study are in line with the results of research by Ogden (2006), Prajogo & Olhager (2012) which found that an event has an impact on the distribution of goods.

As a result of Covid-19, it is hoped that the Bali Provincial Government needs to make policy breakthroughs to encourage the fulfillment of consumer goods needs in Bali independently so that they do not always depend on supplies from outside Bali. If this policy is not taken, there is a concern that Bali will lack supplies of consumer goods.

To find out the per capita consumption of the Balinese population due to the Covid-19 pandemic, it is necessary to analyze the normality test. Table 3 shows the results of the normality variable of the Balinese per capita consumption variable.

Table 3. Results of Normality Test Variable

Variables	Time	Kolmogorov-Smirnov		Shapiro-Wilk	
		Statistics	Sig.	Statistics	Sig.
PCK_1	Before	0.118	0.116*	0.942	0.632
	After	0.120	0.132*	0.919	0.467
PCK_2	Before	0.191	0.200*	0.918	0.452
	After	0.141	0.200*	0.955	0.773
Description: - PCK is per capita consumption - subscripts 1 and 2 declare 1st event and 2nd event					

Based on Table 3 shows the results are entirely insignificant (sig.> 0.05) meaning that the null hypothesis is accepted. Data analyzed were normally distributed. Then the research hypothesis testing uses parametric test that is independent sample t-test.

Table 4 shows descriptive statistics of per capita consumption of Bali population, before and after the two events related to Covid-19.

Table 4. Descriptive statistics per capita consumption of Bali population

Variable	Time	Mean	Std. Deviation
PCK_1	Before	102.6235	19.5261
	After	99.0472	17.4320
PCK_2	Before	98.3874	20.1481
	after	91.3621	23.4728
Note: n = 7			

Based on Table 4, after finding the first positive patient of Covid-19, per capita consumption of Bali population decreased. After determining the status of a national disaster, per capita consumption has declined. This means that the decline in per capita consumption of the population of Bali after determining the status of national disaster is greater than before. This descriptive statistic shows that the determination of the status of a national disaster has a greater impact on the decrease in per capita consumption of the population of Bali than the events of the announcement of the first patient Covid-19.

The 1st event had a bigger impact than the 2nd event, because in the 2nd event the government expanded the lockdown due to the Covid-19 pandemic. As a result, many companies close their businesses and lay off their employees. There was a decrease in people's income, as a result per capita consumption after the second incident had decreased.

Table 5 shows the results of different test per capita consumption of Bali's population before and after 1st and 2nd event.

Table 5. Different Test Results

Variable	t	Sig. (2-tailed)
DS_1	3,154	0.008 **
DS_2	6,638	0,000 ***
Note: ** significant at α = 5%		

Source: SPSS analysis (processed)

Based on Table 5, differences in per capita consumption of Bali population before and after the announcement of the first case (1st event) Covid-19 statistically significant, indicated

by the significance value 0.008 < 0.05. Likewise, the difference in per capita consumption before and after the determination of the national disaster status (2nd event) was also statistically significant, indicated by a significance value of 0.000 < 0.05. These results indicate that the announcement that both the 1st event since the announcement of the discovery of the first case of Covid-19, and the 2nd event, namely the determination of the status of a national disaster, had a significant impact on the decline in consumption per capita of the population of Bali.

The results of the study are in line with the results of research by Fikri & Amri (2014), Leon & Rafael (2015) who found that an event has an impact on people's consumption. The Covid-19 pandemic has reduced income and reduced purchasing power, thus demanding that people change their financial behavior to be smarter in financial planning, especially in regulating consumption patterns.

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CONCLUSION

From all the test results, it can be concluded that the supply of consumer goods to Bali and the consumption per capita of the Balinese population during the Covid-19 pandemic have a significant effect. There is a significant difference in the supply of consumer goods to Bali and the consumption per capita of the Balinese population, before and after the 1st event, namely the announcement of the first case discovery of Covid-19, and the second event, namely the determination of the status of a national disaster. The average supply of consumer goods and per capita consumption of the population of Bali, decreased after the 1st event and again decreased after the 2nd event.

The results of this study are in accordance with the signaling theory view that there is a signal for those who make decisions, namely suppliers of consumer goods and public consumption for announcements containing bad news on both events. As a result of this information, there was a significant decrease in the supply of consumer goods from outside Bali to Bali and the consumption per capita of the Balinese population.

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SUPLLY OF CONSUMER GOODS, PER CAPITA CONSUMPTION DUE TO COVID-19 PANDEMIC

Abstrak

Pandemik Covid-19 yang terjadi sekarang mempengaruhi geliat perekonomian. Penelitian ini bertujuan untuk menguji perubahan pasokan barang-barang konsumsi ke Bali dari luar Bali di wilayah Indonesia dan perubahan konsumsi per kapita penduduk Bali, karena pandemik Covid-19. Dua peristiwa diamati, yaitu peristiwa pertama adalah pengumuman kasus positif pasien pertama Covid-19 di Indonesia, dan peristiwa kedua adalah penentuan status bencana nasional oleh pemerintah Indonesia. Analisis data dilakukan dengan menggunakan uji beda dengan program SPSS v.23. Hasil analisis menemukan bahwa terjadi perbedaan dalam pasokan barang konsumsi ke Bali dari luar Bali dan konsumsi per kapita penduduk Bali pada peristiwa pertama dan peristiwa kedua. Pasokan barang konsumsi dan konsumsi per kapita menurun secara signifikan setelah pengumuman kasus positif pertama Covid-19 dan kemudian semakin menurun setelah pemerintah Indonesia menyatakan status bencana nasional. Penetapan status bencana nasional berdampak lebih besar terhadap penurunan konsumsi per kapita penduduk Bali dibandingkan peristiwa pengumuman pasien pertama Covid-19. Akibat Covid-19, diharapkan Pemerintah Provinsi Bali perlu membuat terobosan kebijakan guna mendorong pemenuhan kebutuhan barang konsumsi di Bali secara mandiri agar tidak selalu tergantung pada pasokan dari luar Bali. Adanya pandemic Covid-19 menurunkan pendapatan dan mengurangi daya beli, sehingga menuntut masyarakat untuk lebih cerdas dalam mengelola keuangan, termasuk mengatur pola konsumsi sesuai skala prioritas kebutuhan.

Abstract

The Covid-19 pandemic that is happening now is affecting the economy. This study aims to examine changes in the supply of consumer goods to Bali from outside Bali in the Indonesian territory and changes in the per capita consumption of the Balinese population, due to the Covid-19 pandemic. Two events were observed, namely the first event was the announcement of the first positive case of Covid-19 in Indonesia, and the 2nd event was the determination of the status of a national disaster by the Indonesian government. Data analysis was performed using a different test with the SPSS v.23 program. The results of the analysis found that there was a difference in the supply of consumer goods to Bali from outside Bali and the per capita consumption of the Balinese population in the first and 2nd events. The supply of consumer goods and per capita consumption decreased significantly after the announcement of the first positive case of Covid-19 and then further decreased after the Indonesian government declared a national disaster status. The determination of the status of a national disaster has a greater impact on reducing the per capita consumption of the Balinese population than the announcement of the first Covid-19 patient. As a result of Covid-19, it is hoped that the Bali Provincial Government needs to make policy breakthroughs to encourage the fulfillment of consumer goods needs in Bali independently so that they do not always depend on supplies from outside Bali. The Covid-19 pandemic has reduced people's income and reduced buying power, thus demanding people to be smarter in managing finances, including adjusting consumption patterns according to the priority scale of needs.

Keywords:

Covid-19, Supply, Consumption, Event Study

INTRODUCTION

The widespread spread of the Covid-19 pandemic in the world including Indonesia certainly has an impact on the economic stretch. The World Health Organization (WHO) has stated that Corona Virus Disease 2019 (COVID-19) is a pandemic and Indonesia has stated that covid-19 as a non-natural disaster in the form of disease pandemics which must be undertaken as an effort to prevent it from increasing cases. Starting since the Indonesian government on March 2, 2020 announced the first two patients confirmed cases of Covid-19 in Indonesia, followed later on March 14, 2020 President Jokowi established the Covid-19 container as a national disaster. This situation certainly affects the freedom of movement in various community activities, companies and countries.

Jogiyanto (2012: 392), in signaling theory explained that the information published as an announcement will give a signal to interested parties in decision making. If the announcement contains a positive value, then it is expected that there will be a reaction when the announcement is received by the interested parties. The reaction is shown by a change in activity. Stakeholders first interpret and analyze the information as good news or bad news (Wang & Zhu, 2013). The results of this interpretation of information will later influence decision making, if many interested parties have a pessimistic view due to bad news from the information received, then it will reduce its activities. Conversely, if interested parties look optimistic due to good news from information received, then he will strengthen his activities (Hu, 2017).

Several studies related to an event have an impact on distribution cooperation (Yu et al., 2001; Zhao et. Al., 2002; Simatupang et al, 2004; Kwon & Suh, 2004), distribution of goods (Ogden, 2006; Prajogo & Olhager, 2012), supply chain performance (Panayides & Lun, 2009; Wu et al. 2014), market reactions (MacKinlay, 1997; Cready & Desert, 2010), consumption behavior (Teppa, 2014), consumption expenditure (Ezeji et al., 2015; Varlamova & Larionova, 2015), household consumption (Tapsin & Aycan, 2014; Ioan, 2015; Mignouna, 2015; Nicklaus, 2015; Varlamova & Larionova, 2015), household consumption (Fikri & Amri, 2014; Leon & Rafael , 2015).

Distribution of goods between islands in Indonesia is a vital activity to be disrupted. Bali, one of the regions in Indonesia, relies heavily on the supply of consumer goods from outside Bali, accounting for more than 70%, mainly supply from Java, has been disrupted because some regions outside of Bali, which have so far been carrying out regional quarantine. The same situation Covid-19 has also reduced the income of Balinese residents and impacted on per capita consumption. Table 1 shows the percentage of supply of consumer goods from outside Bali to Bali and Table 2 shows the level of per capita consumption of Bali population, during the period December 2019 - March 2020. Table 3 shows the level of per capita consumption of Bali population over the last five years.

Table 1 Supply of Consumer Goods to Bali from Outside Bali Indonesia December 2019 - March 2020

Month	Supply of consumer goods in Bali (food and non-food)
December 2019	71.35%
January 2020	70.78%
February 2020	65.17%
March 2020	40.62%

Source: Data processed

Table 1 shows the percentage decline continues every month. The biggest decrease occurred in March 2020, which was 40.62%, namely in the month in which Covid-19 cases were discovered in Indonesia and the government established the status of a national disaster. The decrease in March almost doubled from December 2019, indicating that the determination of the status of a national disaster had a significant impact on reducing the supply of consumer goods in Bali.

Table 2 Per capita consumption (food and non-food) of Bali population December 2019-March 2020

Month	Per capita consumption (food and non-food)
December 2019	Rp. 115,681
January 2020	Rp. 112,715
February 2020	Rp. 107,530
March 2020	Rp. 90,379

Source: Data processed

Table 2 shows a decrease in the amount of consumption per capita every month. The biggest decrease occurred in March 2020 compared to February 2020 which was

Rp. 17,151. As it is known that in March 2020 the Covid-19 case was first discovered in Indonesia and the government established the status of a national disaster.

Table 3 Per Capita Consumption (food and non-food) Bali Population in Year 2015-2019

Years	Per Capita Consumption (food and non-food)
2015	Rp. 1,045,145
2016	Rp. 1,099,561
2017	Rp. 1,332,085
2018	Rp. 1,367,032
2019	Rp. 1,387,154

Source: Data processed

Table 3 shows that in normal circumstances there is an increase in per capita consumption of the population of Bali every year from 2015 - 2019.

In this study there are two objectives. The first objective is to examine the effect of the Covid-19 case on the supply of consumer goods in Bali, carried out with the amount of supply of consumer goods to Bali around the event. The second research objective examines the per capita consumption of Bali population, carried out by comparing the average per capita consumption before and after the event.

This study differs from other studies in that it analyzes the decisions taken by suppliers of consumer goods and per capita consumption on two events at once. Other studies only analyze after and before an event.

RESEARCH METHOD

This research is a quantitative study of an event study, a study that studies the market reaction to an *event* whose information is published as an announcement. Event studies can be used to test the information content of an announcement (MacKinlay, 1997). This research data uses data from Bank Indonesia and the Bali provincial statistics bureau in 2019, then processed according to research needs. Data analysis used a different test with the help of SPSS version 23 (Ghozali, 2105).

*Testing of supply of consumer goods due to the covid-19 pandemic***.**

An announcement contains of course information, so some related parties will react around the time of the announcement (Cready & Desert, 2010). The reaction included the supply of consumer goods entering Bali from outside Bali. To find out

the reaction is done by testing the difference/ supply gap of consumption goods statistically. The gap in the supply of consumer goods is the difference in supply that occurs due to an event with the consumption supply under normal conditions (Falk & Levy, 2009). If the supply of consumption goods of an event is equal to the supply of normal consumption goods, then there is no gap in the supply of consumption goods or the gap in supply of consumption goods is equal to zero (Sujono, 2016). If the average supply of consumer goods is zero, it means that there is no information content of changes in the supply of consumer goods that occur. The understanding of time around events in this study is from seven days before the event to seven days after the event (Groenwold, 2014).

The calculation of the supply of consumer goods due to an event in this study is formulated in equation (1). Calculation of normal consumption supply using model-adjusted beta, formulated in equation (2). The estimation period is generally the period before the event period. The event period is also called the observation period or event window. Calculation of the supply gap of consumer goods is in equation (3).
Calculation of supply of consumer goods due to an event according to equation (1):

$$RDS_t = \frac{DS_t - DS_{t-1}}{DS_{t-1}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where: RDS_t = realization of supply of consumer goods in the t-period, $DS_{t\,=}$ supply of consumer goods in the t-period, DS_{t-1} = supply of consumer goods one day before the t-period.

To calculate the supply of consumer goods normally using model-adjusted beta contained in equation (2) with the formula:

$$EDS_t = \alpha + \beta.DS_t + e_t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where: EDS_t = supply of consumer goods normally in the t-estimation period, α = intercept, β = slope coefficient, DS_t = supply of consumer goods normally in the t-period, e_t = residual error in the t-estimation period.

To calculate the gap in the supply of consumer goods is to reduce the supply of consumer goods due to events with a normal supply of consumer goods. The gap in the supply of consumer goods can be calculated by the formula in equation (3):

$$GDS_t = RDSt - EDSt \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3)$$

Where : GDS_t = Gap of supply of consumer goods in the t-period, RDS_t = supply of consumer goods due to events in the t-period, EDS_t = supply of normal consumption goods in the t-estimated period.

Testing of per capita consumption to the Covid-19 pandemic

To answer the public reaction as indicated by per capita consumption because of the announcement of Covid-19. To test whether the Covid-19 pandemic caused differences in per capita consumption of Bali population before and after the announcement by the government.

In calculating changes in per capita consumption using the formula in equation (4) follows:

$$PCK_t = \frac{CK_t - CK_{t-1}}{CK_{t-1}} \quad \text{..... (4)}$$

Where: PCK_t = Changes in per capita consumption in the t-period, CK_t = per capita consumption in the t-period, CK_{t-1} = per capita consumption one day before the t-period.

RESULT AND DISCUSSION

To find out the average supply of consumer goods to Bali from outside Bali on 1st event, namely since the Indonesian government announced the first two patients confirmed Covid-19 cases in Indonesia on March 2, 2020 and on 2nd event, namely after President Jokowi declared Covid- 19 as a national disaster on March 14, 2020.

Table 1 shows the descriptive statistics of supply of consumer goods to Bali from outside Bali on 1st and 2nd events.

Table 1. Descriptive Statistics of Supply of Consumer Goods

Day	1st Event		2nd Event	
	Mean	Std. Dev	Mean	Std. Dev
H-7	-0.0106	0.0023	-0.0323	0.0173
H-6	-0.0235	0.0116	-0.0473	0.0176
H-5	0.0002	0.0129	-0.0521	0.0189
H-4	-0.0018	0.0128	0.0001	0.0143
H-3	-0.0165	0.0115	-0.0253	0.0167
H-2	0.0007	0.0093	0.0005	0.0124
H-1	-0.0035	0.0135	-0.0173	0.0172
H0	-0.0015	0.0141		

H+1	-0.0127	0.0187	-0.0431	0.0116
H+2	-0.0235	0.0142	-0.0567	0.0134
H+3	-0.0256	0.0171	-0.0854	0.0143
H+4	-0.0308	0.0182	-0.0721	0.0139
H+5	-0.0323	0.0173	-0.0623	0.0137
H+6	-0.0473	0.0176	-0.0125	0.0139
H+7	-0.0521	0.0189	-0.0104	0.0282
Min	-0.0521		-0.0721	
Max	0.0007		0.0005	

Based on Table 1, it can be seen that the 2nd event, namely the determination of the status of a national disaster, becomes the momentum of regional quarantine, so that it is considered the zero point of the event date (H0). It can also be seen that there has been a rather large change in the supply of consumer goods to Bali from outside Bali around 1st event, namely when the Indonesian government announced the first two patients confirmed cases of Covid-19 in Indonesia on March 2, 2020 and around 2nd event, namely President Jokowi declared Covid-19 as a national disaster on March 14, 2020.

Before 1st event, the supply of consumer goods to Bali was still normal with standard fluctuating conditions. In the seven days before the 1st event the supply of consumer goods to Bali decreased compared to the previous day. Six days before the event, the supply of consumer goods fell again. In the five days before 1st event, there was an increase in the supply of consumer goods. However, it fell again in the four days before 1st event. Then it fell again in the three days before 1st event. On the two days before 1st event, there was an increase in the supply of consumer goods again. Meanwhile, one day before the first event, there was another decline in the supply of consumer goods to Bali. This means that during the seven days prior to the first event, the supply of consumer goods from outside Bali to Bali had not been constrained, it was seen that there was still fluctuation. On average, there has been a decline because several regions have started to reduce supply to Bali, even though there has been no 1st event. This is because the news that Covid-19 has spread globally, so there is caution in group activities including sending supplies of consumer goods to Bali.

After the 1st event, the supply of consumer goods to Bali has decreased since the first day and finally continues to fall until the seventh day after the 1st event. One day after the 1st event, it immediately resulted in a decrease in supply. Two days after

1st event decreases, then three days after 1st event drops again. Four days after 1st event, the average decline in supply was getting bigger. Five days after 1st event which is also seven days before 2nd event, the average supply decline is getting bigger. Six days after 1st event, which was also six days before 2nd event, the supply of consumer goods to Bali continued to decline. And seven days after 1st event or five days before 2nd event, there was a large decline in the supply of consumer goods to Bali. So, if the average supply of consumer goods to Bali is calculated from the first event to the seventh day thereafter, there is a decrease of 3.474%. The decline in the supply of consumer goods as a result of Covid-19 is not a decrease that was previously predicted but a decline due to compulsion due to natural events. This is where the Balinese people have no planned preparation to fulfill their consumption.

What is interesting is the supply of consumer goods in the four days prior to the 2nd event there was an increase in the supply of consumer goods to Bali. This is due to the dwindling supply of consumer goods in Bali and the tendency to loosely monitor the implementation of regional quarantine in several areas which are the source of the supply of consumer goods to Bali. In the three days before the 2nd event, supply again decreased and increased again in the two days before the 2nd event. One day before the 2nd event the supply fell again.

After the 2nd event there was a continuous decline, the day after the announcement until the seventh day of this study. Starting one day after 2nd event the supply of consumer goods started to fall again. Two days after 2nd event experienced a bigger decline than the previous day and three days after 2nd event decreased even more. The 2nd event has made the government take a stronger stance to reduce any activity outside the home. Four days after the 2nd event there was a decrease in the supply of consumer goods to Bali, but the decline was smaller than the three days after the 2nd event. Furthermore, the league days, six days and seven days after the 2nd event, the supply continues to decline, it's just that the decline is not as big as the days previous. This situation is due to the fact that supplier companies have begun to feel a lack of income. The inability to deliver supplies to Bali is not due to internal factors, but rather to the global condition that is being hit by Covid-19.

These events (1st and 2nd events) are the starting point for a reduction in shipments of goods to Bali, including the supply of consumer goods, because several

areas outside Bali have closed both small and large areas. In a signaling theory perspective, 1st and 2nd events are a signal that the Covid-19 pandemic has resulted in a decrease in the supply of consumer goods from outside Bali to Bali.

Table 2 shows the results of the test of the significance of the supply of consumer goods to Bali from outside Bali on the 1st and 2nd.

Table 2. Results of Significance Tests on the Supply of Consumer Goods

Day	1st event			2nd event		
	T	Sig. (2-tailed)	Mean Difference	T	Sig. (2-tailed)	Mean Difference
H-7	0.413	0.652	-0.01037	-0.328	0.681	0.01058
H-6	0.330	0.724	0.01092	-1.301	0.679	0.01146
H-5	0.280	0.723	0.01311	-1.173	0.647	-0.01183
H-4	0.270	0.724	0.01092	-1.569	0.234	-0.01487
H-3	-0.317	0.541	-0.01165	-1.071	0.215	-0.01528
H-2	1.724	0.190	0.01580	-0.119	0.766	-0.01088
H-1	-1.182	0.140	-0.01767	-1.297	0.300	-0.01732
H0	1.471	0.171	0.01708			
H+1	-0.608	0.594	-0.01114	-0.479	0.687	0.01104
H+2	-0.652	0.418	-0.01253	1.012	0.422	0.01576
H+3	0.071	0.778	0.01132	0.475	0.581	0.01238
H+4	0.067	0.778	0.01078	0.455	0.471	0.01024
H+5	-0.428	0.681	0.01058	0.486	0.534	0.01213
H+6	-1.401	0.679	0.01146	0.575	0.550	0.01238
H+7	-1.273	0.647	-0.01183	0.212	0.738	0.01249

Based on Table 2, shows that there is a significant difference in the supply of consumer goods around the date of the first patient announcement Covid-19 (1st event) and around the date of announcement of the determination of national disaster status (2nd event).

After analyzing the significance test, it can be seen that the 1st and 2nd events have indeed significantly decreased the supply of consumer goods to Bali from outside Bali. So far, the supply of consumer goods in Bali depends a lot on areas outside Bali. With the Covid-19 pandemic the situation has changed, the supply of consumer goods to Bali has decreased, supplies have become limited and in the end the consumption of the Balinese people has decreased. Of course, it takes innovation and creativity of the Balinese people to be independent in producing consumer goods, so that supplies of consumer goods can be maintained.

All this time most of the consumer goods in Bali are supplied from outside Bali. Covid-19 is an unexpected event. Bali is not ready to produce its own consumer goods to fulfill the needs of the Balinese people. Once the supply of consumer goods decreases, there will be a depletion of supplies so that it can have an impact on the total consumption of Balinese people.

The results of this study are in accordance with the viewpoint of the signaling theory, it appears that there are signals for those who make decisions, namely suppliers of consumer goods for information published as an announcement containing bad news on both events. So that the information has a real impact on the decline in the supply of consumer goods from outside Bali to Bali.

The results of the study are in line with the results of research by Ogden (2006), Prajogo & Olhager (2012) which found that an event has an impact on the distribution of goods. A bad event can result in disruption of the supply and distribution of goods to a place. The Covid-19 pandemic is an extraordinary event that has an impact on the quarantine of several areas outside Bali which have been the main suppliers of consumer goods. In this study, seen from the supply side, the events 1st and 2nd would disrupt the supply of consumer goods needed by the Balinese population.

To find out the per capita consumption of the Balinese population due to the Covid-19 pandemic, it is necessary to analyze the normality test. Table 3 shows the results of the normality variable of the Balinese per capita consumption variable.

Table 3. Results of Normality Test Variable

Variables	Time	Kolmogorov-Smirnov		Shapiro-Wilk	
		Statistics	Sig.	Statistics	Sig.
PCK_1	Before	0.118	0.116*	0.942	0.632
	After	0.120	0.132*	0.919	0.467
PCK_2	Before	0.191	0.200*	0.918	0.452
	After	0.141	0.200*	0.955	0.773

Description: - PCK is per capita consumption
- subscripts 1 and 2 declare 1st event and 2nd event

Based on Table 3 shows the results are entirely insignificant (sig. > 0.05) meaning that the null hypothesis is accepted. Data analyzed were normally

distributed. Then the research hypothesis testing uses parametric test that is independent sample t-test.

Table 4 shows descriptive statistics of per capita consumption of Bali population, before and after the two events related to Covid-19.

Table 4. Descriptive statistics per capita consumption of Bali population

Variable	Time	Mean	Std. Deviation
PCK_1	Before	102.6235	19.5261
	After	99.0472	17.4320
PCK_2	Before	98.3874	20.1481
	after	91.3621	23.4728
Note: n = 7			

Based on Table 4, after finding the first positive patient of Covid-19, per capita consumption of Bali population decreased. After determining the status of a national disaster, per capita consumption has declined. This means that the decline in per capita consumption of the population of Bali after determining the status of national disaster is greater than before. This descriptive statistic shows that the determination of the status of a national disaster has a greater impact on the decrease in per capita consumption of the population of Bali than the events of the announcement of the first patient Covid-19.

The average per capita consumption after the 1st event decreased compared to that before the 1st event. Before the 1st event the average per capita consumption was 102.6235, while after the 2nd event the average consumption per capita was 99.0472. Likewise, the average per capita consumption after the second event decreased compared to before the second event. Before the second event the average per capita consumption was 98.3874, while after the second event the average per capita consumption was 91.3621.

The 2nd event has a bigger impact than 1st event, because in 2nd event the government has further expanded the lockdown due to the Covid-19 pandemic. The first event is considered local bad news because only the first Covid-19 patient was found in certain areas, while the second event covers a broader range of information in Indonesia, so the level of information contained in it is for a broader purpose as well.

Base on the perspective of signaling theory, the announcement of 2nd event contains higher bad news information than 1st event. The impact of decreased supply and income due to the Covid-19 pandemic after 2nd event is increasingly felt. The existence of the Covid-19 pandemic on the one hand limits the supply of consumer goods, so that the availability of consumer goods in Bali is limited, on the other hand many companies close their businesses, lay off and lay off their employees, people's income decreases, purchasing power decreases. The limited supply of consumer goods and a decrease in the income of the people in Bali has resulted in a decline in per capita consumption. With income that is not what it used to be, people must manage finances more intelligently, including adjusting consumption patterns according to the priority scale of needs.

Table 5 shows the results of different test per capita consumption of Bali's population before and after 1st and 2nd event.

Table 5. Different Test Results

Variable	t	Sig. (2-tailed)
DS_1	3,154	0.008 **
DS_2	6,638	0,000 ***
Note: ** significant at α = 5%		

Source: SPSS analysis (processed)

Based on Table 5, differences in per capita consumption of Bali population before and after the announcement of the first case (1st event) Covid-19 statistically significant, indicated by the significance value 0.008 < 0.05. Likewise, the difference in per capita consumption before and after the determination of the national disaster status (2nd event) was also statistically significant, indicated by a significance value of 0.000 < 0.05. These results indicate that the announcement that both the 1st event since the announcement of the discovery of the first case of Covid-19, and the 2nd event, namely the determination of the status of a national disaster, had a significant impact on the decline in consumption per capita of the population of Bali.

Currently the Covid-19 pandemic is not a local event, but a global event that has paralyzed broad and massive economic movements. When there was the announcement of the 1st event alone, it had caused the supply of consumer goods from outside to Bali to decline which caused the supply of consumer goods in Bali to

decrease. Then the addition of the announcement of the 2nd event had an even greater impact on the decline in the supply of consumer goods to Bali. The absence of a supply of consumer goods from areas outside Bali which has been the basis for this has resulted in a limited supply thus affecting household consumption. Even though the per capita consumption of the Balinese is not only determined by the amount of goods supplied from outside Bali but also by other factors such as buying power, population income, priority needs. However, the decline in the supply of goods from outside Bali to Bali due to Covid-19 could trigger a decrease in the per capita consumption of the Balinese population. This is because the supply of goods is reduced, the supply is running low so that consumption falls.

This is in line with the research of Nicklaus (2015) and Varlamova & Larionova (2015), that an event will affect household consumption, as well as the research results of Fikri & Amri (2014), Leon & Rafael (2015) which found that an event has an impact on community consumption. And this is in accordance with the Covid-19 pandemic like now.

CONCLUSION

Consumer goods play an important role in meeting the needs of the population. The economic value of consumer goods with their supply chains is sufficient to support the development goals of Indonesia in general and Bali in particular. When viewed from the supply side, the availability of consumer goods in Bali depends on supplies from outside Bali, while from the demand side, one of them depends on the level of income of the Balinese people. Continuity of supply and demand will be maintained if conditions are stable without any extraordinary events. The current Covid-19 pandemic is an extraordinary event that is interesting to observe regarding the supply of consumer goods and consumption per capita in Bali.

This study found that the supply of consumer goods to Bali and the per capita consumption of the Balinese population during the Covid-19 outbreak had a significant effect. There are differences in the supply of consumer goods to Bali and the consumption per capita of the Balinese population, before and after the first event, namely the announcement of the first case discovery of Covid-19, and the 2nd event, namely the determination of the status of a national disaster. The average supply of

consumer goods and consumption per capita of the population of Bali, decreased after the 1st event and again decreased after the 2nd event.

The results of this study are in accordance with the signaling theory view that there is a signal for those who make decisions, namely suppliers of consumer goods and public consumption for announcements containing bad news on both events. As a result of this information, there was a significant decrease in the supply of consumer goods from outside Bali to Bali and the consumption per capita of the Balinese population.

In this condition, although there are many obstacles, there is a big enough opportunity to increase the capacity of local producers to improve their abilities and skills in producing consumer goods needed by the Balinese people. The role of local government is to make wise regulations that favor the independence of local producers. Providing special training and easy credit facilities will certainly encourage local producers and the community to develop the production of consumer goods, as well as increase people's income which tends to decline due to the Covid-19 pandemic. Increasing the opinion of the Balinese people will lead to a multiplier effect which will further increase per capita consumption.

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Dengan ini kami selaku Redaksi Jurnal Economics Development Analysis Journal (EDAJ) Jurusan Ekonomi Pembangunan Fakultas Ekonomi Universitas Negeri Semarang memberitahukan bahwa artikel dengan judul **"SUPLLY OF CONSUMER GOODS, PER CAPITA CONSUMPTION DUE TO COVID-19 PANDEMIC"** telah dilakukan blind review oleh mitra bestari jurnal kami. Rekomendasi dari mitra bestari adalah dilakukan revisi oleh penulis artikel.

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