

Behavioral Economics and Its Positive Impact on Overcoming the Corona Pandemic Among Owners of Small and Medium Enterprises

M. Al Qahtani^{1,*}, A. Hamza² and T. Al Nawwash³

¹Department of Case Work, College of Social Work, Princess Nourah bint Abdulrahman University, Riyadh, Kingdom of Saudi Arabia

²Department of Educational Psychology and Educational Statistics, Faculty of Education, Princess Nourah bint Abdulrahman University, Riyadh, Kingdom of Saudi Arabia

³Department of Psychology, Faculty of Education, Princess Nourah bint Abdulrahman University, Riyadh, Kingdom of Saudi Arabia

Received: 22 Aug. 2023, Revised: 23 Sep. 2023, Accepted: 28 Sep. 2023.

Published online: 1 Oct. 2023.

Abstract: In this study, we investigate the role of behavioral economics in assisting small and medium enterprise (SME) owners in overcoming the challenges posed by the COVID-19 pandemic. By understanding the psychological factors that influence decision-making, behavioral economics provides insights into biases and heuristics that can cloud judgment during times of uncertainty and stress. This understanding helps SME owners make more rational choices and offers practical strategies to promote positive behaviors and mitigate the negative impact of the pandemic. Clear and timely communication is essential, enabling SME owners to access vital information about government support programs, safety protocols, and financial assistance. Behavioral economics also addresses the psychological barriers that hinder compliance with health and safety measures, leading to the development of effective interventions that appeal to social norms, use positive framing, and provide incentives. The importance of social support networks and community engagement is emphasized, as they provide emotional support, shared knowledge, and learning opportunities for SME owners. Overall, behavioral economics offers valuable insights and strategies for SME owners to navigate the challenges of the pandemic and develop resilience.

Keywords: behavioral economics, small and medium enterprises (SMEs), COVID-19 pandemic, decision-making, biases, heuristics, national choices, uncertainty, stress, communication, government support programs, safety protocols, financial assistance.

1. Introduction

The outbreak of the Corona pandemic has brought about unprecedented challenges for businesses worldwide, particularly for small and medium enterprises (SMEs). SME owners have faced significant disruptions, financial strain, and uncertainty, requiring innovative solutions to overcome these obstacles and adapt to the rapidly changing business landscape. [3] In this context, behavioral economics has emerged as a valuable tool in understanding and addressing the psychological factors that influence decision-making among SME owners during times of crisis [4].

Behavioral economics, which combines insights from psychology and economics, recognizes that human decision-making is often influenced by biases, heuristics, and social factors that can deviate from traditional rationality assumptions.[1] By studying these behavioral patterns, behavioral economics offers valuable insights into how SME owners make decisions and provides practical strategies to promote positive behaviors and mitigate the negative impact of the Corona pandemic [2].

During the pandemic, SME owners have faced numerous challenges, including making critical decisions under uncertainty, accessing vital information, adhering to health and safety guidelines, and dealing with the emotional toll of the crisis. Behavioral economics provides a multidimensional framework to understand and address these challenges. By examining the psychological biases and heuristics that can cloud judgment, behavioral economics helps SME owners make more rational choices and navigate through uncertain and stressful situations [6].

One of the key areas where behavioral economics has demonstrated its positive impact is in facilitating clear and timely communication [7]. Effective communication is essential for SME owners to access crucial information about

*Corresponding author e-mail: mamualqahtani@pnu.edu.sa

government support programs, safety protocols, financial assistance, and market conditions. By understanding the cognitive biases that may hinder effective communication, behavioral economics offers insights into how to frame information, present it in a compelling manner, and overcome barriers to comprehension and action [8].

Another significant application of behavioral economics during the pandemic is in promoting compliance with health and safety measures. Understanding the psychological barriers that impede

preventive behaviors among SME owners, such as risk perception, social norms, and present bias, enables policymakers and stakeholders to design interventions that effectively encourage adherence to guidelines. Leveraging behavioral insights, campaigns that appeal to social norms, use positive framing, and provide tangible incentives have been developed, resulting in improved compliance and reduced transmission risks [12].

Furthermore, behavioral economics highlights the importance of social support networks and community engagement for SME owners. The pandemic has led to increased isolation and limited social interaction, which can negatively impact mental health and decision-making [9]. By recognizing the significance of peer networks, mentorship programs, and collaborative platforms, behavioral economics encourages the establishment of support systems that provide emotional support, shared knowledge, and learning opportunities. These initiatives foster resilience among SME owners, enabling them to share best practices, receive guidance, and develop coping mechanisms to navigate the challenges posed by the pandemic [15].

2. Methodologies

The study relied on the analytical descriptive approach and the correlative descriptive one to study the possible correlations of the alternative behaviors of firm's owners in facing COVID-19 and some demographic variables.

2.1. Study Limit

1. Place Limits: The owners of small & medium enterprises in Riyadh.

2. Time Limits: The survey was applied during 6 weeks of the 1st semester of the academic year 1441-42h, preceded by applying on a pilot sample to confirm the suitability of its items to the study sample and its validity and reliability.

3. Human Limits: Application on the owners of the small & medium firm with first size of (200) firms in Riyadh.

2.2. Study population & Sample:

The study population includes the owners of small & medium firms in Riyadh City (n200).

Table 1: shows the participants' distribution as per their demographic characteristics

Demographic Characteristics	Freq.	%	Demographic Characteristics	Freq.	%
Areas of work of the institution			Field of the firm activity		
Biomedical supplies	6	3.0	Riyadh region	64	32.0
Coordination	6	3.0	Makka Al Mukarrama	16	8.0
Agriculture	18	9.0	Eastern Province	8	4.0
Traditional manufacturing	14	7.0	Southern Province	14	7.0
Restaurants & lodging	32	16.0	Asser Province	6	3.0
Tourism	12	6.0	Kasseem Province	8	4.0
Power	10	5.0	Al-Madina Al-Monawarah	10	5.0
Means of transport	12	6.0	Al-Gouf Al-Monowarah	8	4.0
Trade & trading exchange	42	21.0	Al-Baha Al-Monowarah	6	3.0
Real estates	24	12.0	Tabouk	8	4.0
Other (Catering, constructing)	16	8.0	Northern borders	8	4.0
Varied Fields	8	4.0	Hael	4	2.0
No. of Employees			Varied Location	40	20.0
Less than 10	70	35.0	Chief Market		
11-50	56	28.0	Local Market	106	53.0
51-300	20	10.0	External Market	22	11.0
500-1000	12	6.0	The same	58	29.0
1000-1500	14	7.0	Both local & external market	4	2.0
5000-10000	14	7.0	Local market, the same	2	1.0
More than 10.000 employees	14	7.0	External market the same	6	3.0

		Both local & external market	2	1.0
Total			200	100.0

From the above table, it is shown that there are (42) participants (21%) whose activity is trade & trading exchange, (8) participants (4%) work in varied activities.

As to the firm location variable, most participants work in Riyadh (Freq. = 64 & % = 32%). While there are 4 participants (2%) working in the Hael region, the employees in their institutions, there were 70 employees (35%), the staff in firm with 500-1000 employees. As for the variable of chief market, the results showed that (106) of the participants (53%) whose firms work in the local market, while (2) participants whose firms work in (the local market and both the local & external market).

2.3 Tools:

The researchers designed a Questionnaire as per likert-5 point in which the score 1 = strongly refuse, 2 = refuse, 3= sometimes, 4= agree, 5= strongly agree.

2.3.1 Questionnaire components:

- 1) **First Part:** It has the participants' first data such as their firm's activity, location, No. of staff, chief market.
- 2) **Second Part:** Studying the alternative behaviors of the owners of small & medium firms in facing COVID-19, it has 3 pivots as follows:
 - 1stPivot: The effect of COVID-19, it has 5 Questions.
 - 2nd Pivot: Deals with how employment is affected by COVID-19, it has 6 questions.
 - 3rd Pivot: Tackles the measures taken within COVID-19, it has 4 questions.

➤ **Steps of Preparing the Questionnaire:**

Following building the study tool to deal with behavioral economics and its impact on overcoming Coronavirus pandemic among the owners of small & medium firms, it was presented to some judges. According to their suggestions and amendments, the researchers performed amendments of some statements till they reached the final form of the tool to be applied on the sample.

The Questionnaire Psychometric Properties -Internal Consistency:

The tool internal consistency was confirmed by calculating the correlation between each statement score and the total score of the pivot in a pilot sample of 35 individuals as shown in the following table:

Table 2: Pearson Correlation coefficient of the tool dimensions with the total score of their dimensions:

Effect of COVID-19 on your job up till now		Effect of COVID on your job as expected in 2020	
Statement	Correlation coefficients	Statement	Correlation coefficients
1	**0.710	1	**0.763
2	**0.822	2	**0.609
3	**0.815	3	**0.637
Current difficulties due to COVID-19		Expected difficult is due to COVID-19	
Statement	Correlation coefficients	Statement	Correlation coefficients
1	**0.755	1	**0.848
2	**0.839	2	**0.778
3	**0.598	3	**0.845

**significant at level (0.01)

From table (2), it is shown that all the statements of the study pivots were significant at (0.01) which shows a high internal consistency of the tool statements and to a high validity of it, so, the tool can be relied on.

➤ **Tool reliability:** Reliability was verified by using Alpha Cronbach coefficient as shown in the following table:

Table 3: shows Alpha Cronbach coefficient for measuring the study tool:

#	Pivot	No. of statements	Coefficient of reliability
1	The effect of COVID-19 on your job now	3	0.708
2	The effect of COVID-19 as expected	3	0.728
3	Present difficulties due to COVID-19	3	0.719

4	Expected difficulties due to COVID-19	3	0.713
Total reliability		12	0.811

The above table (3) shows that the study tool enjoys acceptable reliability, as total reliability score (Alpha) was (0.811) and reliability coefficients of the pivots ranged from (708-728) which are all high and can be relied on in application.

3 Results

3.1. Study Questions:

First Question: What is the effect of COVID-19 on small & medium firms?

To answer this question, we calculated the frequencies and percentages of the responses of the participants as follows:

In case work can't be completely resumed by March, how long can your firm endure it?

Table 4: shows to what extent the firm can endure stopping of work by March:

Period	Frequencies	%
One Month	32	16.0
3 Month	48	24.0
6 Month	46	23.0
One Year	16	8.0
More than one Year	58	29.0
Total	200	100.0

Table (4) shows that there are (58) firms (29%) can endure breakdown for more than one year by March, there are (48) firms (24%) can endure breakdown for 3 months up to March, Moreover, there are (46) firms (23%) can endure stopping for 6 months up to March, there are (32) firms (16%) can endure stopping for one month up to March. Finally, there are 16 firms (8%) can endure stopping for one year up till March if work doesn't resume completely.

1- What is the estimated effect of the pandemic on operation for the 1st half of 2020?

Table 5: Show the estimated effect of the pandemic on operation for the 1st half of 2020.

Category	Frequency	%
Yearly reduction by 10%	6	3.0
No effect	30	15.0
Yearly reduction by 10-20 %	40	20.0
Yearly reduction by 20-30%	42	21.0
Yearly reduction by 30-50%	30	15.0
Yearly reduction more than 50%	52	26.0
Total	200	100.0

Table (5) shows that (52) firms (26%) expect that the expected effect of the pandemic on operation returns of the half of 2020 is a yearly decrease of more than (50%), and there are 42 firms (21%) expected yearly reduction of 20-30%, while there are 40 firms (20%) expect a yearly reduction of 10-20%. Moreover, there are 30 firms (15%) expect a yearly reduction of (10-30%) in operation returns during the 1st half of 2020. Finally, there are (6) firms (30%) expect no effect of operation returns during the 1st half of 2020. Finally, there are (6) firms (3%) expect no impact on the earnings of operations during the 1st half of 2020.

2- What is the estimated effect on the workforce during the 1st half of 2020?

Table 6: shows the estimated effect on operation earnings in the 1st half of 2020.

Category	Frequency	%
No effect	48	24.0
Effect on workforce by 10%	42	21.0
Effect on workforce by 10-20%	18	9.0
Effect on workforce by 20-30%	38	19.0
Effect on workforce by 30-50%	24	12.0
Effect on workforce by more than 50%	18	9.0
Effect on workforce by 10% & 10-20%	6	3.0
Effect on workforce by 10% & by 10-20% & 20-30%	4	2.0
Effect on workforce by 30-50% & more than 50%	2	1.0

Total	200	100.0
--------------	------------	--------------

Table (6) shows that there are 48 firms (24%) see that there is no effect estimated of the pandemic on employees in the 1st half of 2020, there are 42 firms (21%) argue that there is an effect by (10%) in this period. Besides, there are 38 firms by (19%) see that employees are affected by (20-30%) during the same period, and 24 firms by 12% see that employees are affected by *30-50%) during the same period. Finally, there are 2 firms by (1%) see that employees are affected by (30-50%) and by more than 50%.

3- What are the challenges faced by your firm during this pandemic?

Table 7: shows the challenges faced by the firms during this pandemic:

Challenges	Frequency	%
Laborers cost	34	17.0
Purchase cost	24	12.0
Costs of rent, water, electricity, & power supply	45	22.5
Finance cost	41	20.5
Taxes cost	34	17.0
Stock cost	30	15.0
Penalties cost	-	-
Costs of prevention from the pandemic and comb at it	29	14.5
Other	31	15.5

Table (7) shows the main challenges faced by small & medium firms during the pandemic. As costs of rent, water, electricity & power supply ... etc. occupied.

The 1st rank of challenges by frequency (45) and by (17%), followed by finance, frequency 41 (20.5%), then labor cost and taxes costs, freq. (34) firms (17%), the other challenges, freq. (31) firms, (15.5%), followed by stock cost of freq. (30) firms (15%), on the sixth rank is pandemic prevention, freq. (29) firms (14.5%). Finally, is buy cost, the least one by freq. 24 & (12%).

4- What are the main challenges faced by the business market?

Table 8: explain the main challenges faced by the business market during the pandemic:

Challenges	Frequency	%
Delay or failure in getting back payments	30	15.0
Honoring contracts or paying the costs of rents	32	16.0
Customers may cancel orders due to the pandemic	35	17.5
Delay or inability to deliver orders	39	19.5
Low orders in the market	47	23.5
Difficult finance	17	8.5
Total	200	100.0

Table (8) shows that low orders at market is one of the main challenges during the pandemic by freq. 47 (23.5%), followed by delay or failure in delivery of orders by freq. (39) (19.5%), then the possible cancelling of customers' orders due the pandemic by freq. 35 firms (17.5%), followed by honoring contracts or paying the costs of rents faced by business market by freq. 32 firms (16%), in the 5th rank is delay or failure of getting back payments by freq. 30 firms (15%). Finally, difficult finance during the pandemic.

Second Question: How is your business affected by COVID-19?

To answer this question, frequencies & percentages of the participant's responses are calculated as follow:

1- Did you stop business due to the current crisis?

Table 9: shows the extent of breakdown due to the present crisis:

Responses	Frequency	%
No	18	9.0
Yes, temporary breakdown due to low orders	51	25.5
Yes, temporary breakdown due to official instructions	45	22.5
Yes, I stopped operations, but now, they are resumed	62	31.0
Yes, final stopping	16	8.0
Other	8	4.0
Total	200	100.0

Table (9) shows that there are 62 firms (31%) stopped their operations but now they are working, 51 firms (25.5%) stopped operations due to low orders, 45 firms (22.5%) temporarily stopped working temporarily due to official instructions. Moreover, there are 18 firms (9%) did not stop working due to the crisis. Finally, 8 firms (4%) defined the causes of stopping work due to the crisis.

Table 10: shows the effect of COVID-19 on your business now:

Variables	Responses											
	Nothing		0-25%		25-50%		50-100%		More		I don't know	
	K	%	K	%	K	%	K	%	K	%	K	%
Earnings	0	0	43	21.5	101	50.5	39	19.5	6	3.0	11	5.5
Orders	0.0	0.0	45	22.5	98	49.0	29	14.5	5	2.5	23	11.5
Workforce	0.0	0.0	46	23.0	91	45.5	30	15.0	11	5.5	22	11.0

2- What is the effect of COVID-19 on your business up till now?

From the table (10) it is shown that:

- Concerning earnings, the results showed that 10 firms with (50.5%) have effect degree on earnings due to COVID-19 ranged from 25-50%, 43 firms (21.5%) whose earnings are affected by (zero – 25%) due to COVID-19, while 39 firms (19.5%) their earning effect ranged from (50-100%), 11 firms (5.5%) who could not define the degree of effect on their earnings due to COVID-19, 6 firms (3%) the ratio of their earnings effect exceed 100% due to COVID-19.
- Regarding orders, the results showed that 98 firms (49%) whose earnings that 98 firms (49%) whose earnings effect ranged from (25-50%), 45 firms (22.5%) whose earning effect ranged from (zero – 25%) due to COVID-19, while 29 firms (14.5%) whose their earnings effect ranged from (50-100%), 23 firms (11.5%) could now the degree of affecting their earnings due to COVID-19, 5 firms (2.5%) whose earning effect ratio due to COVID-19 was higher than (100%).
- Relating to manpower, the results showed that 91 firms (45.5%) whose their earnings effect due to COVID-19 ranged from (25-50%), 46 firms (23%) whose earnings effect ranged from (zero-25%), while 30 firms 15% with earnings effect of (50-100%), 22 firms (11%) don't know the ratio of affecting their earnings due to COVID-19, firms (5.5%) with effect ratio exceed (100%) due to COVID-19.

3- What is the effect of COVID-19 on your expected business in 2020?

Table 11: the effect of COVID-19 on your expected business in 2020:

Variables	Responses											
	Nothing		0-25%		25-50%		50-100%		More		I don't know	
	K	%	K	%	K	%	K	%	K	%	K	%
Earnings	2	1.0	106	53.0	33	16.5	18	9.0	18	9.0	33	16.5
Orders	5	2.5	104	52.0	10	5.0	30	15.0	21	10.5	30	15.0
Workforce	9	4.5	95	47.5	24	12.0	31	15.5	16	8.0	25	12.5

From the above table (11), it shown that:

- Relating earnings, the results is showed that there are 106 firms (53%) was the ratio of their expected earnings effect by COVID-19 in 2020 ranged from (zero-25%), 33 firms (16.5%) whose earnings effect due to COVID-19 ranged from (25-50%), while there are 18 firms (9%) who's the ratio of their earnings effect ranged from (50-100%) and over.
- As for orders, the results showed that there are 104 (52%) firms whose orders were affected by (zero-25%), 30 firms (15%) whose expected orders in 2020 due to COVID-19 were affected by a ratio ranged (50-100%) and I don't know, while there are (21) firms (10.5%) whose expected orders in 2020 were affected by 100%. Besides, there are (10) firms (50%) whose expected orders for 2020 were affected by ratio ranged from (25-50%), 5 firms (2.5%) whose expected orders for 2020 were not affected.
- If for workforce, the results showed that there are 95 firms (47.5%) whose workforce was affected by ratio (zero – 25%), 31 firms (15.5%). Who's expected workforce in 2020 was affected by (50-100%, while there are 25 firms (12.5%) don't know the extent of affecting their workforce by COVID-19, 24 firms (12%) whose ratio of affecting their workforce in 2020 ranged from (25-50%). In addition, there are 9 firms (4.5%) have no expectation about the effect of COVID-19 in their workforce.

4- Have you faced difficulties related to the following due to COVID-19?

Table 12: Difficulties faced by the firms up till now due to COVID-19:

Variables	Response					
	No		Yes		I don't know	
	K	%	K	%	K	%
Lack of earnings	3	1.5	143	71.5	54	27.5
Commodities shipping	7	3.5	159	79.5	34	17.0
Lack of cash flow	5	2.5	176	88.0	19	9.5

From the table above, it is shown that:

- Concerning the difficulties faced by the firms up till now due to COVID-19, especially lack of supplies, most of the participants (143) (71.5%) agree with the lack of supplies, while (54) firms (27.5%) have no idea about it, 3 firms (1.5%) don't agree at it.
- Relating commodities shipping, most of the participants (159) firms (79.5%) approve of the difficulties of goods shipping due to COVID-19, while (34) firms (17%) have no idea about this hardship, 7 firms (3.5%) don't agree with this difficulty.
- As for the difficulty of low cash flow, most of the participants (176) firms (88%) approve of this difficulty due to COVID-19, while (19) firms (9.5%) have no idea about this crisis, 5 firms (2.5%) don't agree at this difficulty.

5- Do you expect to face the following difficulties in 2020 due to COVID-19?

Table 13: Expected difficulties in 2020 due to COVID-19:

Variables	Response					
	No		Yes		I don't know	
	K	%	K	%	K	%
Low supplies	49	24.5	88	44.0	63	31.5
Goods shipping	56	28.0	99	49.5	45	22.5
Lack of cash flow	26	13.0	109	54.5	65	32.5

The table (13) shows the expected difficulties in 2020 due to COVID-19:

- Concerning low supplies, the greatest ratio of the participants (88) (44%) agrees at this difficulty due to COVID-19, while 63 firms (31.5%) have no idea about this difficulty, 49 (24.5%) firms agree at this difficulty.
- As for goods shipping, 99 firms (49.5%) agree with this difficulty due to COVID-19, while 56 (28%) don't agree with it, 45 firms (22.5%) have no idea about this difficulty.
- Relating to the lack of cash flow, most participants, 109 firms (54.5%) approve of this difficulty due COVID-19, while 63 (32.5) have no idea about this difficulty, 26 firms (13%) don't agree with this difficulty.

Do you face the problem of low laborers, if yes, what causes?

Table 14: shows how much the firms face the problem of low laborers and its results:

Causes	Freq.	%
No	57	28.5
Because wok area is affected by COVID-19	12	6.0
Because laborers leave workplace for fear of COVID-19	32	16.0
Because workers movement are limited due to health Quarantine	86	43.0
As workers care about their families	13	6.5
Total	200	100.0

From table (14), it is shown that most of the firms face the problem of low laborers by Freq. (143) & 71.5%, while 57 firms (28.5) don't face this problem. The most common cause of this problem is the constraints on workers' movements in the healthy Quarantine by Freq. 86 firms & (43%), followed by them fear of infection by freq. 32 firms (16%), followed by that the workers care about their families by freq. 13 firms (6.5%), finally because work area is affected by COVID-19 by freq. 12 firms (6%).

1. What are the measures taken under the influence of COVID19?

To answer these questions, frequencies and percentages of the participants' responses were calculated, as follows:

3.2. Suppliers:

Table 15: shows the measures taken under the influence of COVID19 related to suppliers:

Measures taken	Freq.	%
Negotiation to reduce purchases	78	39.0
Negotiation on delay of payments	66	33.0
Coordination of coordination & good transportation	72	36.0
Searching for new suppliers	68	34.0
Buying prevention supplies for resuming work safely	66	33.0

Tale (15) shows the measures taken due to COVID-19 related to suppliers, as negotiation with suppliers to reduce the size of purchases has the top rank with freq. 78 firms (39%), while coordination of logistics and goods transportation with freq. 72 firms (36%) followed by looking for new suppliers with freq. 68 (34%). Finally, are negotiations about delayed payments & buying prevention supplies for resuming work safely with freq. (66) firms (33%).

Table 16: shows the measures taken due to COVID-19 related to operation costs reduction:

Measures	Freq.	%
Communication with the departments concerned to resume work at earliest	84	42.0
Communication with the staff relating their layoffs & lowering wages temporarily	50	25.0
Communication with the staff relating performing flexible changes, work at house online, etc.	150	75.0
Negotiation with the lenders for reducing the costs of finance and prolonging schedule of payment	46	23.0
Negotiation with the lessors to reduce or exemption of rents and those of equipment rental	44	22.0
Submitting requests to the official bodies to get aids	46	23.0
Stopping some production lines, sales outlets... etc.	26	13.0

Table (16) shows that the most measures prominent taken due to COVID-19 related to reducing operations costs is communication with the employees to execute flexible transformations and work at house online with freq. (190) firms (75%), followed by communicating with the departments concerned to resume work at ear lies safely with freq. (84) firms (42%), followed by negotiating with the staff about layoffs and temporary reduction of wages with freq. 50 staff (25%), then, negotiation with the lesser for towering or exemption of rental and the costs of equipment rental ... etc., and submitting requests to the official bodies concerned to get aids, with freq. 46 firms (23%). Finally, breakdown of some production lines and sales outlets as least measures as for lowering operation costs, it was with freq. (26) firms (13%).

3.3. The Market:

Table 17: measures taken due to COVID-19 related to the market.

Measures	Freq.	%
Discuss with the customers the effect of the pandemic on partnership and looking for solutions	78	39.0
Negotiation with the customers about delay of delivering the orders	68	34.0
Arrange with the customers adding compensations fo the loss hours of production	70	35.0
Coordinating the services of transportation & coordination of the sold products	50	25.0
Reducing the marketing investment	32	16.0
Reducing the prices of products & services	46	23.0
Increase of the price of products & services	26	13.0

Table (17) shows the measures taken due to COVID-19 relating to the market, as discussion, the customers about the effect of COVID-19 on partnership is on the top with freq. 78 firms (39%), followed by working overtime to compensate lost work hours with freq. (70) firms (35%), followed by negotiating with customers about delay of delivering orders with freq. (68) (34%), then coordinating logistic & transportation services with freq. (46) firms (23%), followed by reducing marketing investments with (32) firms (16%), finally increase of products & services prices with freq. 26 firms (13%).

1. Effect of the pandemic on the firm's future development strategy:

Table 18: shows the effect of the pandemic on the firm's future development strategy:

Measures	Freq.	%
Accelerating the technological innovation for products & services	82	41.0
Promoting the policies of preponderance, replacement & delivery	112	56.0
Plan to withdrawal from the market	60	30.0

Table (18) shows that the effect of the pandemic on the future development strategy of the small/ medium firms in Riyadh city is represented in promoting policies of weighing, replacement, and delivery with freq. (112) firms (56%)

followed by accelerating technological innovations with 82 firms (41%), finally plan of withdrawal from the market freq. (60) (3%)

4. Discussions

The findings of the study highlight the significant impact of the COVID-19 pandemic on the earnings of firms, with a majority of the surveyed companies experiencing a noticeable effect on their financial performance. Over half of the firms (53%) reported earnings effects ranging from zero to 25% due to the pandemic in 2020. Additionally, a substantial portion (26%) anticipated a significant reduction in earnings of more than 50% for the first half of 2020. These findings underscore the severity of the economic consequences caused by the pandemic, particularly for businesses operating in the rising and developing markets. The susceptibility of these markets to economic and financial disturbances makes them particularly vulnerable to the disruptive effects of a global crisis like COVID-19. Despite the implementation of policy interventions aimed at mitigating the impact, the study suggests that the efficacy of such measures may be limited in the face of the prolonged and profound consequences of the pandemic.

In this context, the application of behavioral economics in shaping public policies becomes crucial. Behavioral economics offers insights into how individuals make decisions, incorporating theories derived from psychology and sociology to understand human behavior more comprehensively. By studying actual behavior rather than relying solely on expected behavior, policymakers can design more effective strategies that align with the decision-making processes of individuals. One innovative concept introduced by behavioral economics is "Choice Architecture," which focuses on the design of various methods through which options are presented to consumers and examines how these presentations impact decision-making. By understanding the influence of choice architecture on decision-making, policymakers can structure options in a way that encourages desired behaviors and outcomes. The integration of behavioral economics into public policy formulation can have significant implications for addressing the challenges posed by the COVID-19 pandemic. By considering the psychological and behavioral factors that influence individual decision-making, policymakers can design interventions that are more likely to be effective and impactful. However, it is important to note that while behavioral economics provides valuable insights, it is not a panacea for all the challenges brought about by the pandemic. The long-lasting effects of the crisis on the economy and society require a comprehensive approach that combines behavioral economics with other policy tools and measures. Additionally, ongoing research and analysis are necessary to continually refine and adapt policy interventions based on evolving behavioral patterns and market dynamics.

5. Conclusions

In conclusion, The COVID-19 pandemic has brought about significant economic and financial disruptions, particularly affecting small and medium enterprises (SMEs) and emerging markets. The findings of the study highlight the adverse effects on firms' earnings, with a majority reporting substantial reductions in financial performance. In response to these challenges, behavioural economics supplies a valuable approach for understanding and addressing the decision-making processes of individuals. By integrating insights from psychology and sociology, behavioural economics offers a comprehensive framework to inform the design of public policies. The concept of choice architecture allows policymakers to shape options in a way that influences decision-making and encourages desired behaviours. While behavioural economics offers promising solutions, it is important to recognize that the consequences of the pandemic are complex and long-lasting. The efficacy of policy interventions may be limited, and a multifaceted approach is needed to navigate the challenges effectively. Ongoing research and analysis are crucial to adapt interventions to evolving behavioural patterns and market dynamics. behavioural economics supplies valuable insights and tools for policymakers to address the economic impact of the COVID-19 pandemic. By understanding human behaviour and incorporating behavioural insights into policy design, policymakers can enhance the effectiveness of interventions and support SMEs in overcoming the challenges they face. However, a comprehensive approach that combines behavioural economics with other policy tools is necessary to mitigate the long-term consequences of the ongoing crisis and promote sustainable economic recovery.

6. Recommendations

The research provides several recommendations to support small and medium firms and mitigate the impact of COVID-19. These recommendations include:

1. Financial Support: Activating financial support measures specifically targeted towards small and medium firms is crucial. The pandemic has severely affected their earnings, and providing financial assistance can help them navigate the economic challenges and ensure their sustainability.

2. Ongoing Awareness: Continuously disseminating information about effective strategies and methods for small and medium firms to deal with COVID-19 is essential. This awareness campaign should focus on minimizing the pandemic's impact on their operations and distribution processes, enabling them to adapt and thrive in the new business environment.
3. Flexible Work Arrangements: Promoting flexible work hours and implementing remote work options can contribute to the adoption of precautionary measures and limit COVID-19 infections. These measures not only prioritize the health and safety of employees but also enhance productivity and distribution capabilities of the firms.
4. Conducting Behavioral Economic Studies: Conducting studies that apply behavioral economic principles to understand their positive effects in overcoming COVID-19 can provide valuable insights. By applying these principles to larger firms, researchers can assess the effectiveness of behavioral interventions and their potential to mitigate the impact of the pandemic.
5. Research in Behavioral Economics: Investing in research and studies on behavioral economics is essential, particularly in regions where such material is lacking, such as the Arab Library. Promoting research in this field and encouraging the use of behavioral interventions in various public domains, including education, healthcare, energy consumption, and social organizations, can lead to significant positive outcomes.
6. Operational and Economic Challenges: Conducting studies on the specific operational and economic challenges faced by small and medium firm owners during COVID-19 is recommended. This research can help identify the unique difficulties they encounter and inform the development of proposed strategies to enhance their operational and distribution capabilities during the pandemic.

By implementing these recommendations, policymakers, researchers, and stakeholders can provide targeted support and resources to small and medium firms, empowering them to overcome the challenges posed by COVID-19 and foster their long-term growth and resilience.

Acknowledgment:

The authors extend their appreciation to the Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project number (PNU-DRI-Targeted-20-015)

We would like to express our sincere gratitude to all individuals and organizations who contributed to the completion of this research study on the positive impact of behavioral economics in overcoming the COVID-19 pandemic among small and medium enterprises (SMEs).

First and foremost, we extend our appreciation to the participants of the study, the owners of SMEs, who generously shared their experiences and insights despite the challenging circumstances they faced during the pandemic. Their valuable input and cooperation were instrumental in shaping the findings and recommendations of this research.

We are also thankful to the research team members who diligently collected, analyzed, and interpreted the data, ensuring the accuracy and reliability of the study. Their dedication and expertise in behavioral economics and research methodologies have greatly contributed to the quality of the results.

Furthermore, we would like to acknowledge the support and guidance provided by our advisors and mentors throughout the research process. Their expertise and constructive feedback played a crucial role in refining the research design and strengthening the conclusions drawn from the data.

Lastly, we would like to extend our appreciation to the broader academic and professional community in the field of behavioral economics. Their pioneering work and existing literature provided a solid foundation for this research, and their ongoing contributions continue to shape our understanding of human behavior and decision-making.

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

References

- [1] Akkaya, B. (2020). Review of leadership styles in perspective of dynamic capabilities: Empirical research on managers in manufacturing firms. *YönetimBilimleriDergisi*, 18(36), 389-407.
- [2] Akkaya, B., & Tabak, A. (2017). The impact of dynamic capabilities on firm perceived marketing performance of small and medium sized enterprises. *Transnational Marketing Journal*, 5(2), 121-125.

- [3] BAKIRTAŞ, D., & DEMİRHAN, H. (2015). İhtiyaçveistekparadoksu: İktisadivemetafizikbirYaklaşım. *SiyasetEkonomiveYönetimAraştırmalarıDergisi*, 3(3), 71-87.
- [4] Darıcı, S. (2020). Şeytanın Al Dediği. *DestekYayınları, İstanbul*.
- [5] De Pedraza, P., Guzi, M., & Tijdens, K. (2020). *Life Dissatisfaction and Anxiety in COVID-19 pandemic* (No. 544). GLO Discussion Paper.
- [6] Duygun, A., & Şen, E. (2020). Evaluation of Consumer Purchasing Behaviors in the COVID-19 Pandemic Period in the Context of Maslow's Hierarchy of Needs. *PazarlamaTeorisiveUygulamalarıDergisi*, 6(1), 45-68.
- [7] Lourenço, J. S., Ciriolo, E., Almeida, S. R., & Troussard, X. (2016). Behavioural insights applied to policy. *European Report 2016*, 54.
- [8] Maina, P. N. (2010). *Fair value reporting challenges facing small and medium-sized entities in the agricultural sector in Kenya* (Doctoral dissertation, University of South Africa).
- [9] Opening Remarks at a Press Briefing by KristalinaGeorgieva following a Conference Call of the International Monetary and Financial Committee (IMFC). (2020). Retrieved from <https://bit.ly/2X1Ds0s>
- [10] Roggeveen, A. L., & Sethuraman, R. (2020). How the COVID-19 pandemic may change the world of Retailing. *Journal of Retailing*, 96(2), 169-171. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7183942/>
- [11] Şen, E. (2020). Global virus of the digital village Covid-19 and senism. *Eurasian Journal of Social and Economic Research*, 7(3), 176-204.
- [12] Stanciu, S., Radu, R. I., Sapira, V., Bratoveanu, B. D., & Florea, A. M. (2020). Consumer Behavior in Crisis Situations. Research on the Effects of COVID-19 in Romania. *Annals of the University Dunarea de Jos of Galati: Fascicle: I, Economics & Applied Informatics*, 26(1).
- [13] UNDESA (2020). Monthly Briefing on the World Economic Situation and Prospects, No. April 2020, United Nations Department ,136. of Economic and Social Affairs
- [14] Wright, O., & Blackburn, E. (2020). How COVID-19 will permanently change consumer behavior. Accenture.