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THE IMPACT OF ADVERTISING CLAIMS ON PRODUCT PURCHASE DECISIONS CONCERNING CONSUMERS' HOPE

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Dr. Carin Chuang, Purdue University Northwest

ABSTRACT

This study examines the effects of two types of claims in functional food advertisements on a consumer's hope and the relationship between a consumer's hope and his evaluation of the advertised product. The results reveal that health claims trigger a higher hope compared to nutrition information, and that a higher hope results in a more favorable evaluation. This study also examines the effects of a consumer's nutrition knowledge. The results indicate that a more knowledgeable consumer generates a higher hope than a less knowledgeable consumer regarding ad claims. However, health claims have a stronger effect on less knowledgeable consumers than on more knowledgeable consumers. Managerial implications and directions for future research are also discussed.

Keywords: *advertising, consumer's hope, nutrition knowledge, health*

INTRODUCTION

Marketing is the process of identifying customer needs and determining how best to meet those needs. Marketing refers to preparing a product for the marketplace. In contrast, advertising is making your product and service known to people within that marketplace. Thus, advertising is the exercise of promoting a company and its products or services through paid channels. In other words, advertising is a step in the marketing process. An advertising claim is a statement made in advertising about the benefits, characteristics, and/or performance of a product or service designed to persuade the customer to make a purchase.

Hope is ubiquitous in marketing contexts and is particularly relevant for advertising.

Marketers induce hope from consumers (e.g., promoting the idea that functional food can decrease the risk of disease or enhance physical function) to make their products appealing to consumers. MacInnis and Mello (2005) suggested that consumers' hopes triggered by marketing tactics will influence consumers' brand attitudes, satisfaction, and other related variables. Previous studies (Andrews et al. two thousand; Kozup et al. 2003) have estimated the effect of advertising in the food industry on consumers' behaviors through consumers' product attitudes and purchase intentions. Furthermore, a number of studies (Jacoby et al. 1977; Levy et al. 1993) have indicated that consumers have problems understanding product-related claims in food advertisements. Collins and Loftus (1975) suggested that the level of nutrition knowledge plays a

vital role and affects how a consumer processes claims in food ads. However, there have been few empirical studies investigating the relationship between a consumer's hope and their evaluation of the advertised product. This study employs an empirical approach to examine the effects of two types of food ad claims on consumers' hopes and their evaluations of the product. This study also examines how a consumer's nutrition knowledge moderates the relationship between ad claims and the consumer's hope.

The effect of advertising claims on hope

According to Levidge and Steiner (1961process), marketers could convey information to consumers through means of advertisement. Moreover, scholars found that consumers think that the product is healthy when health claims or nutrition information are presented on the products (Roe, Levy and Derby, 1999; Williams, 2005). If different ad claims had a great effect on consumers' evaluations of nutritional value (Kozup et al, 2003), consumers can imagine the health outcomes that they yearn for after consumption of the promoted product.

Consumers desire healthier bodies and want to avoid having serious diseases nowadays. Additionally, health claims convey that the product would "enhance specific physical function" and "reduce the disease risk" when people consume it. The article uses two methods to view the effect of health claims on consumers' hope.

Health claims which include enhancement of physical function and reduction of disease risk will assist consumers in imagining their future outcomes, such as healthier lives and fewer disease-related risks. Consumers will evaluate nutritional value and perceive the risk of disease associated with consumption. Thus, the claims will increase individuals' assessment that a goal-congruent outcome will occur, and in turn, increase the possibility of hope.

When appraising health claims, consumers would notice the importance of health outcomes and yearn for decreasing disease risk as well as maintaining a specific function of the body to enhance the goal congruency of the outcome. Additionally, the messages of claims increase the importance by perceived deficiencies between the current and desired health condition, thereby, stimulating consumers' hope. Besides, Kozup and his associates (2003) also found that the availability of nutrition information also is associated with the same general pattern of results as well as health claims, but the effect of nutrition information on hope will be decreased because of the lack of specific disease information. Thereby, the nutrition information would generate the relevance between the disease and a specific product and thus, enhance yearning for a goal-congruent outcome, though the information does not expose the specific disease issue. This article extrapolates that consumers' hope will be triggered after reading claims in functional food advertising. Additionally, the health claims will have a stronger influence on consumers' hopeful thinking. On the discussion above, we posit the following hypothesis:

H1: Compared to the nutrition information, the health claims in functional food advertising will evoke higher hope.

Nutrition knowledge

Consumer knowledge can be defined as the information stored in memory that's relevant to the purchase, consumption, and disposal of goods or services (Blackwell, Miniard and Engel, 2006). What we know or do not know strongly influences our decision-making processes. In the food industry, prior research indicated that consumers show their interest in nutritional information; however, they lack the necessary knowledge and skills to effectively comprehend this information (Jacoby, Chestnut, and Silberman, 1977). In addition, the nutrition research indicated that consumers, in general, had experienced many problems in understanding nutritional information (Andrews, Burton and Netemeyer, 2000a). According to spreading activation theory, (Collins and Loftus, 1975) the knowledge would help individuals build the nodes in a semantic network and the intersection between them, and thus increase the ability of memory searching. Thereby, nutrition knowledge levels may play a crucial role in how consumers process nutritional information in advertisements (Andrew, Netemeyer and Burton, 1998). Consumers with greater knowledge structures and networks can better use expanded amounts of information and encode them in terms of specific nutrient content (Andrew, Netemeyer and Burton, 2000). Additionally, the previous research found that highly knowledgeable people would use other criteria (e.g., experience) rather than promoted nutrients in evaluating the nutritiousness of advertised products (Brucks, Mitchell and Staelin, 1984). Shimp (1983) also indicated that prior knowledge might help consumers avoid accepting incorrect implications from product advertising.

Companies try to provide promoted claims to tell people how to achieve their goals. Accordingly, the advertising can reveal secrets, or previously unknown steps to achieve consumers' goal-congruent outcomes. According to the hope model (Snyder, 2000), pathway thinking enhanced hopes by affecting perceptions of possibility. When highly knowledgeable consumers are exposed to health claims or nutrition information in ads, they would use prior knowledge and utilize expanded amounts of information rather than promoted nutrients in evaluations. Conversely, lower-knowledge consumers whose lack of generalized knowledge (Cowley and Mitchell, 2003) causes them to think that these messages provide another pathway or tip to achieve their goal-congruent outcomes, thus evoke hope for those consumers. Moreover, this paper predicts that the health claims which include enhanced function and reduction of disease risk will evoke higher hope when consumers have lower nutrition knowledge. Based on this discussion, the article expects that :

H2: Compared to consumers with high nutrition knowledge level, the relationship between ad claims and hope is stronger for those with lower nutrition knowledge level.

The effect of hope on product attitude

Attitude refers to an individual's relatively consistent evaluations, feelings and dispositions toward an object or idea (Kotler and Armstrong, 2001), and thus makes individuals

generate a liking or disliking thought. Additionally, attitudes are the evaluative judgments and will influence consumers' purchase and consumption intentions. Therefore, companies are very interested in understanding about consumers' attitudes toward their products. Consequently, the goal of most advertising is to form positive product attitudes based on the claims presented in the advertisements (Munch, Boller and Swasy, 1993).

In order to explain consumers' processing of advertising claims and attitude formation, previous research often relies on multi-attribute attitude model (Fishbein and Ajzen, 1975). A multi-attribute object (e.g., product or brand) is viewed as a bundle of attributes resulting to costs and benefits of differential desirability to people (Wilkie and Pessemier, 1973). Meanwhile, beliefs about a product's attributes are important because they determine the favorability of one's attitude toward products. Fishbein's model was written, for example, where A_0 = the overall attitude toward the object o, b_i = belief about attribute i in relation to the object, and e_i = the evaluative consequence of the belief (Rossiter and Percy, 1980). Therefore, the model indicated that product attitude is based on the summed set of beliefs about the product's attributes weighted by their evaluation of them (Wilkie and Pessemier, 1973). According to this model, a consumer forms beliefs about whether product attributes and performance results are true and desirable, and creates a product attitude consistent with the beliefs and emotional reactions. Thus, product attitude is defined as constituting the consumer's overall degree of affect or liking for the product.

The effect of hope on product attitude

The emotion generated by an advertisement would impact consumers' attitudes toward a product and form a brand belief. Moreover, Alcock (1995) indicated that when people are yearning for a goal-congruent outcome, they are more vulnerable to believing what they want to believe. Therefore, consumers are willing to believe and are persuaded by any message they can get to fulfill their yearning. Food manufacturers can evoke consumers' beliefs and then influence their product attitudes by exposing different types of claims in the advertisement.

As indicated in the illustration above, emotion also is an important factor for consumers in decision-making. When a strong sense of hope by exposing ad claims, we expect consumers are more likely to encode information that suggests that the outcome is possible. In this way, consumers will tend to believe the advertisements and are more vulnerable to trusting the messages which can fulfill their desired goal. Forming consumers' beliefs would impact the favorability of their attitude toward the product. Therefore, the hypothesis proposes:

H3 : Compared to consumers with lower hope, those with higher hope will have more favorable product attitudes.

The effect of hope on purchase intention

Many surveys included purchase intention in such areas as new food products, purchased packaged foods, automobiles, and capital equipment (Morrison and Donald, 1979). Furthermore,

Whitlark, Geurts and Swenson (1993) indicated that sales forecasting provides a basis of estimating profits associated with implementing a particular strategy. A common forecasting method used by companies is asking customers about the likelihood of buying the product. For example, companies ask customers by using probability statements, like “probably will buy” or “definitely will buy a given product” in order to forecast sales of new products or modified products (Whitlark, Geurts and Swenson, 1993). To sum up, the definition of purchase intention represents what consumers think they will buy. Using consumers’ purchase intention as a predictive measurement, companies can forecast their sequence behaviors (Morwitz and Schmittlein, 1992). In this study, we will examine how marketers pursue different claims in food advertising to influence consumers purchase intention by evoking their hope.

The effect of hope on purchase intention

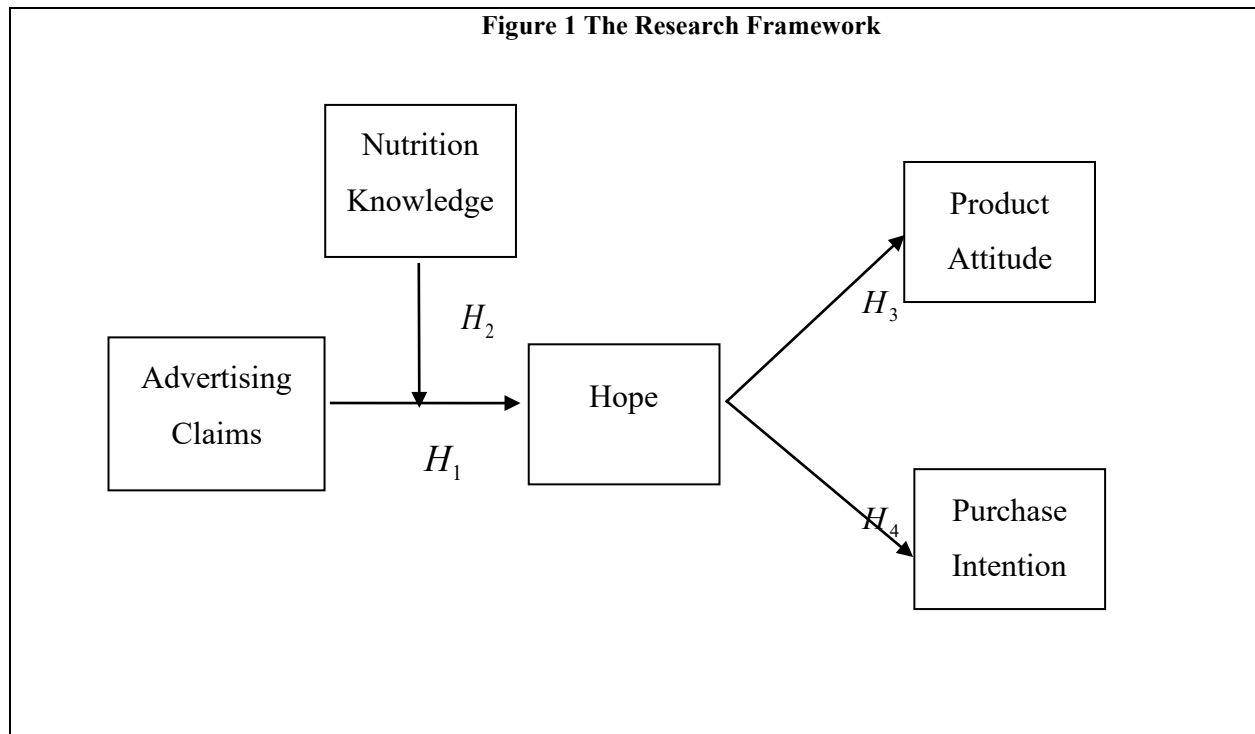
Previous researchers found that purchase intention is positively associated with perceived value (Dodds, Monroe, and Grewal, 1991; Grewal, Krishnan, Baker, and Borin, 1998). When examining the effect of hope on consumers’ intentions, this paper will find the link between hope and consumers’ perceived value with a given product, in turn, to evoke consumers’ intentions.

MacInnis and Mello (2005) noted that consumers would experience the higher value of products or services depending on the stronger intensity of hope. Moreover, studies posited that value is an evaluation of what consumers receive in an exchange versus what they give up (Dodds, Monroe and Grewal, 1991). Meanwhile, the purchase price has both external properties and internal representations that are derived from the perceptions of price, thus resulting in some meaning to consumers. Moreover, price is the indicator of the amount of sacrifice and the level of quality (Dodds, Monroe and Grewal, 1991). When consumers’ hopeful thinking is stimulated by the nutrition information or health claims in advertising, consumers are yearning for the goal-congruent outcomes. The greater yearning associated with more intense levels of hope suggests that consumers are willing to bear whatever costs are necessary to achieve the outcome (MacInnis and Mello, 2005). Hence, consumers will have higher perceived value for the product. On the other hand, perceived quality refers to a buyer who evaluates a product’s cumulative value (Grewal, Monroe and Krishnan, 1998). The more important a person perceives a goal-congruent outcome, the greater the value is that is attached to its occurrence (MacInnis and Mello, 2005). Therefore, hopeful consumers strongly desire the benefits which suggest that the outcome occurred would, in turn, to have highly perceived value. Therefore, the high perception of quality and less sacrifice results in high perception of value. Meanwhile, perceived value has its positive effects on consumers’ purchase intention (Dodds, Monroe and Grewal, 1991; Grewal, Krishnan, Barker and Borin, 1998; Grewal, Monroe and Krishnan, 1998). To sum up, consumers have high purchase intentions to buy the product when they have strong intense levels of hope.

H4: Compared to consumers with lower hope, those with higher hope will have higher purchase intentions.

Research framework

Based on the literature review above, this study developed a research framework as shown in Figure 1. It was supposed that consumers' exposed to advertising that includes health claims or nutrition information will influence consumers' hope. Meanwhile, consumers' nutrition knowledge would generate a moderated effect on this causal relationship. Additionally, in the pre-purchasing stage, consumers' hope would influence their product attitudes and purchase intentions.



Research hypotheses

Based on the discussion in previous sections, four hypotheses were developed in Table 1 :

Table 1 Research Hypotheses

Concept	Hypotheses
Effect of Ad Claims	H ₁ : Compared to the nutrition information, health claims in functional food advertising will evoke higher hope.
Moderating Role of Nutrition Knowledge	H ₂ : Compared to consumers with high nutrition knowledge level, the relationship between ad claims and hope is stronger for those with low nutrition knowledge level.
Effect of Hope	H ₃ : Compared to consumers with lower hope, those with higher hope will have more favorable product attitudes. H ₄ : Compared to consumers with lower hope, those with higher hope will have higher purchase intentions.

METHOD

Participants

The population used for this study was the public in attendance at a shopping center in Taiwan. Two hundred forty-six samples participated in the experiment with 224 valid questionnaires in our final analyses. The twenty-two questionnaires eliminated from analysis were from participants who failed to successfully complete the experiment. Table 2 shows the descriptive statistics of the valid sample.

Table 2 Characteristics of the Participants

Frequency	%	Frequency	%
Gender		Spending per Month	
Male 106	47.3	Under NT\$10,000 187	83.5
Female 118	52.7	NT\$10,001 ~ 15,000 30	13.4
Consumption Experience with Yogurt		NT\$15,001 ~ 20,000 6	2.7
Never 7	3.1	NT\$20,001 ~ 25,000 0	0
Seldom 98	43.8	NT\$25,001 ~ 30,000 1	0.4
Sometimes 107	47.8	Over NT\$30,001 0	0
Often 11	4.9	Consumption Frequency During Last Month	
Always 1	0.4	0 times 104	46.5
Health Condition	Mean*	1 ~ 5 times 108	48.2
Eat too much in one meal 3.01		6 ~ 10 times 10	4.5
Lack of appetite 2.23		11 ~ 15 times 1	0.4
Diarrhea 2.39		16 ~ 20 times 1	0.4
Poor digestion 3.21		21 ~ 25 times 0	0

*We calculated the mean based on 5-point rating scales, where 1 = “Strongly Disagree” and 5 = “Strongly Agree”.

Products and Advertisements

The experiment stimulus was a printed advertisement promoting a new strawberry yogurt made by a fictitious company. We chose yogurt as the target product because it is qualified for presenting health claims and nutrition information, and it is familiar to most participants. Roe et al. (1999) indicated that familiar products may minimize potential confounding effects associated with the participants' learning about a new product. Additionally, as a functional food, yogurt has multiple benefits, which allows the participants to imagine different health outcomes.

All ads contained the same product information except for the claims. Referencing the actual ad of a yogurt product in *Environmental Nutrition* (2006), the nutrition information was presented to participants as: "*There is 1 gram of fat and over 200 billion units of acidophilus per 100 grams of strawberry yogurt.*" On the other hand, the health claim was: "*Rich acidophilus bacteria can decrease the risk of intestinal disease and improve your digestive system. Lower fat levels and calorie count may help you maintain a well-balanced figure.*"

Variables and Measurements

The dependent variable in this study is ad claim, while the independent variables are a participant's nutrition knowledge, product attitude, hope, and purchase intention. Four control variables related to an individual's health consciousness were also measured: health environment sensitivity, physical fitness, personal health responsibility, and nutrition and stress management.

Hope

MacInnis and Mello (2005) argued that hope level is equal to the product of an individual's yearning and possibility. They developed six indicators for possibility and three categories of yearning: desire, importance, and deficiency. The current study uses eighteen items to measure a participant's hope with 5-point rating scales that ranged from 1 for "Strongly Disagree" to 5 for "Strongly Agree". See Appendix A for these items.

Nutrition knowledge

We measured a participant's nutrition knowledge based on the mean of correct answers from a 15-item questionnaire (Andrews et al. 1998, 2000). Higher scores indicate a greater level of nutrition knowledge. Appendix B shows four of the fifteen items.

Product attitude

The current study uses 3 items to measure a participant's product attitude (Howard and Gengler 2001; [Berens](#) et al. 2005) with 5-point rating scales again ranging from 1 for "Strongly Disagree" to 5 for "Strongly Agree". See these items in Appendix C.

Purchase intention

A participant's purchase intention was measured with a 3-item questionnaire using 5-point rating scales, where 1= "Strongly Disagree" and 5= "Strongly Agree" (Grweal et al. 1998; Kozup et al. 2003). See these items in Appendix D.

Procedure

Participants read a magazine and saw an ad for a new product. Each participant was randomly assigned a document containing the ad and a questionnaire. The participant's answers were rated with 5-point rating scales ranging from one for "Strongly Disagree" to 5 for "Strongly Agree". The participants were then evaluated for their levels of nutrition knowledge. The content of the type of ads was identical.

Pretest

The sample consisted of twenty graduate students. SPSS was used to examine the reliability of three variables. We adopted the *t*-test to evaluate the effects of ad claims on respondents' hopes and used regression analysis to evaluate the effects of a respondent's hope on their product attitude and purchase intention. The ad claims did not significantly influence respondents' hopes ($t=1.72$, $p=.10$), but the means were in the desired direction. Additionally, participants' hopes significantly influenced their product attitudes ($F=7.78$, $p=.01$) and purchase intentions ($F=3.99$, $p=.06$).

RESULTS

Reliability analysis

The participants answered a questionnaire containing eleven variables, including a participant's yearning, possibility, product attitude, purchase intention, health environment sensitivity, physical fitness, personal health responsibility, and nutrition and stress management. We measured the internal consistency of all variables through Cronbach's coefficient. The coefficients were greater than 0.6 for five variables: the participant's yearning, possibility, product attitude, purchase intention, health environment sensitivity, and physical fitness. However, the coefficients of a participant's personal health responsibility and nutrition and stress management were .287 and .488, respectively. Malhotra (2004) stated that a value of .6 or less generally indicated unsatisfactory internal consistency. Therefore, we removed a participant's personal health responsibility and nutrition and stress management from further analysis. Furthermore, we removed one item from the measurement of a participant's health environment sensitivity because its Cronbach's coefficient increased from .680 to .703 after we removed the item.

Hypotheses Testing

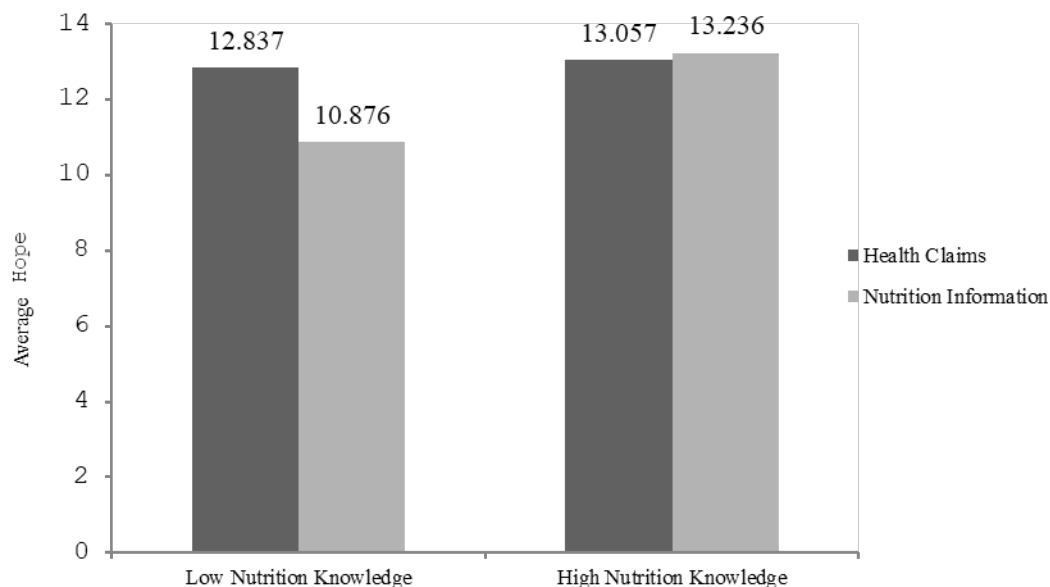
Effects of ad claims on participants' hopes

The average hope evoked by health claims (12.947) was greater than that evoked by nutrition information (12.056). The difference between the two average hopes was significant ($F=4.233$, $p = .041$), thus supporting H1.

Moderating effect of participants' nutrition knowledge

There were 110 participants with low nutrition knowledge and 114 participants with high nutrition knowledge. The average nutrition knowledge scores between the two nutrition knowledge levels were significantly different (M (high nutrition knowledge) =9.64, M (low nutrition knowledge)=5.69, $p< .001$). We found a significant interaction effect ($F=6.103$, $p= .014$) between ad claims and participants' nutrition knowledge, indicating a moderating effect of a participant's nutrition knowledge on the relationship between ad claims and the participants' hope. A participant's nutrition knowledge affected his hope ($F=8.877$, $p= .003$). When reading health claims, participants with high nutrition knowledge had a higher average hope (13.057) than participants with low nutrition knowledge (12.837). As seen in Figure 2, among participants with high nutrition knowledge, their hopes were not significantly different between the two ad claims ($t=-.322$, $p=0.748$). However, among participants with low nutrition knowledge, their hopes were significantly different between the two ad claims ($t=2.939$, $p= .004$). These results support H2.

Figure 2 Average hope of participants with low nutrition knowledge and high nutrition knowledge, triggered by health claims and nutrition information, respectively



This study adopted simple linear regression to examine the correlation between participants' hopes and their product attitudes. The simple regression model was: $Y_1 = \alpha_1 + \beta_1 X$, where the dependent variable Y_1 is a participant's product attitude, and the independent variable X is the participant's hope. As seen in Table 3, the participants' hopes and their product attitudes were positively related ($\beta_1 = .086$, $p < .001$). This correlation indicates that a participant with a higher hope has a more favorable product attitude. This result supports H3.

Table 3 Summary of Simple Regression Analysis for a Participant's Hope Predicting His Product Attitude towards the Advertised Product

	<i>Coefficients</i>	<i>t</i>	<i>p</i>
Intercept	2.396	13.023	.000***
X (Hope)	.086	6.061	.000***
Regression Statistics			
R-Square	.142		
R-Square (Adjusted)	.138		
ANOVA			
F	36.736		
p	.000***		

* $p < .1$, ** $p < .05$, *** $p < .01$

The effect of participants' hopes on their purchase intentions for the advertised product

We adopted simple regression to examine the correlation of participants' hopes on their purchase intentions. The simple regression model was: $Y_2 = \alpha_2 + \beta_2 X$, where the dependent variable Y_2 is a participant's purchase intention, and the independent variable X is the participant's hope. As seen in Table 4, the participants' hopes and their purchase intentions were positively related ($\beta_2 = .107$, $p < .001$). The correlation suggests that a participant with a higher level of hope is more willing to buy the target product than a participant with a lower level. This result supports H4.

Table 4 Summary of Simple Regression Analysis for a Participant's Hope Predicting His Purchase Intention for the Advertised Product

	<i>Coefficients</i>	<i>t</i>	<i>P</i>
Intercept	2.171	11.836	.000***
X (Hope)	.107	7.560	.000***
Regression Statistics			
R-Square	.205		
R-Square (Adjusted)	.201		
ANOVA			
F	57.148		
p	.000***		

* $p < .1$, ** $p < .05$, *** $p < .01$

Moderating effect of control variables

This study also examined the moderating effects of two control variables: a participant's health environment sensitivity and physical fitness on the relationship between ad claims and participants' hopes. We employed two-way ANOVA for this analysis. As shown in Table 5, participants' health environment sensitivity and ad claims had strong interaction ($F=3.833$, $p=.052$). This suggests that a participant's health environment sensitivity influences the relationship between ad claims and the participant's hope. As shown in Table 6, personal physical fitness and ad claims did not have a significant interaction ($F=.087$, $p=.769$). Therefore, personal physical fitness did not influence the relationship between ad claims and participants' hopes.

Table 5 Two-Way ANOVA of Interaction between Ad Claims (A) and a Participant's Health Environment Sensitivity (HES)

	SS	df	MS	F	p
A	52.256	1	52.256	4.910	.028**
HES	60.585	1	60.585	5.692	.018**
A × HES	40.793	1	40.793	3.833	.052**
Error	2341.595	220	10.644		
Total	37389.373	223			

* $p < .1$, ** $p < .05$, *** $p < .01$

Table 6 Two-Way ANOVA of Interaction between Ad Claims (A) and a Participant's Physical Fitness (PF)

	SS	DF	MS	F	p
A	47.446	1	47.446	4.363	.038**
PF	40.153	1	40.153	4.428	.036**
A × PF	.942	1	.942	.087	.769
Error	2392.346	220	10.874		
Total	37389.373	223			

* $p < .1$, ** $p < .05$, *** $p < .01$

DISCUSSION

- (1) The results demonstrate that health claims are more effective than nutrition information in evoking hope in consumers. These findings verify the suggestion of MacInnis and Mello (2005) that marketers should design a set of marketing strategies to stimulate consumers' hope.
- (2) This study shows that nutrition knowledge has a moderating effect on the relationship between ad claims and consumers' hope. When consumers have high nutrition knowledge, there is no significant difference between their hope triggered by nutrition information and those by health claims, respectively. This finding is consistent with the findings of Brucks

et al. (1984), which indicated that more knowledgeable people use their experience and other information rather than the nutrition information presented in ads to evaluate the nutrition of the advertised products. However, this study shows that people with high nutrition knowledge have higher levels of hope than those with low nutrition knowledge. In addition, health claims effectively provide another pathway for less knowledgeable consumers to achieve their goal-congruent outcomes and, in turn, to evoke their hope.

- (3) The results also show that consumers with higher levels of hope will have more favorable product attitudes and stronger purchase intentions. This finding suggests that effective elicitation of hope in marketing can improve consumers' evaluation of the advertised products.

IMPLICATIONS

Through consumers' hope, marketers can convey nutrition-related claims to target market segments and evoke consumers' strongly favorable feelings and willingness to buy the advertised products. This study not only verifies the effect of consumers' hope on their product evaluations, but also shows that research involving "*hope*" is necessary and has its value in marketing.

Implications for marketers

- (1) Marketers should understand that hope is an important variable and can influence consumers' product evaluations. Hope stimuli in ads trigger not only a favorable product attitude, but also a strong purchase intention from a consumer. Therefore, marketers should not ignore the significance of the emotion of consumers' hope. Rather, they should utilize consumers' psychological thoughts to develop effective marketing activities. The results of this study also imply that marketing tactics, such as increasing yearning and turning impossibilities into possibilities, will affect consumers' appraisals and elicit their hope.

- (2) Marketers in the food industry can use health claims in advertising as a marketing tactic. Marketers also need to focus on consumers with low nutrition knowledge. Less knowledgeable consumers can be influenced when health claims are presented. Therefore, marketers and regulators should ensure the correctness and validity of health claims, so that consumers will not be misled by incorrect or deceptive ones.

LIMITATIONS AND FUTURE RESEARCH

- 1) Lohmann and Kant (2000) indicated that the functional food industry promotes their products through different media types. In this study, we studied only the effects of print ads. Future research may be done to examine the influence of other media types on consumers.

- 2) This study adopted a laboratory experimental design to isolate the effects of the variables of interest. However, other crucial factors may also affect a participant's decisions. The entire process was also simulated in under thirty minutes. This period may have been too brief for participants to properly develop hope emotions.
- 3) Future research could extend the research scope to other stages of consumers' decision-making process. In this way, we may be able to extend our understanding of the effects of hope on different consumer-related variables. This would allow researchers to provide more valuable advice to marketers in different industries.

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APPENDICES

Appendix A Items Designed to Measure an Individual's Hope

Yearning

1. I really want to be healthy.
2. Being healthy and avoiding diseases are especially important to me.
3. I need a healthier body.
4. I really want to have a well-balanced figure.
5. I really want to decrease my risk of intestinal disease.
6. Having a well-balanced figure is particularly important to me.
7. Decreasing my risk of intestinal disease is especially important to me.
8. I need a well-balanced figure.
9. I need a healthier digestive system.

Possibility

1. I can have a healthy body.
2. Being healthy and decreasing my risks of diseases could happen.
3. I cannot be healthy. (Reverse)
4. I can keep a well-balanced figure.
5. I can avoid having intestinal disease.
6. Keeping a well-balanced figure could happen.
7. Having a healthy digestive system could happen.
8. I cannot keep a well-balanced figure. (Reverse)
9. I cannot decrease my risk of intestinal disease. (Reverse)

Related reference: MacInnis and Mello (2005)

Appendix B 4 of 18 Items Designed to Measure a Participant's Nutrition Knowledge

1. Saturated fats are usually found in:
 - (A) Vegetables and vegetable oils
 - (B) Animal products like meat and dairy
 - (C) Grain products such as bread and cereal
 - (D) None of the above
 - (E) Do not know
2. Which kind of fat is more likely to be a liquid rather than a solid?
 - (A) Saturated fats
 - (B) Polyunsaturated fats
 - (C) They are equally likely to be liquids
 - (D) None of the above
 - (E) Do not know
3. Which kind of fat is more likely to raise people's blood cholesterol level?
 - (A) Saturated fats
 - (B) Polyunsaturated fats
 - (C) Both
 - (D) None of the above
 - (E) Do not know
4. Which kind of fat is higher in calories?
 - (A) Saturated fats
 - (B) Polyunsaturated fats

- (C) They are both the same
- (D) None of the above
- (E) Do not know

Related reference: Andrews, Netemeyer, and Burton (1998, 2000)

Appendix C Three Items Designed to Measure a Participant's Product Attitude

1. This product gives me a pleasant feeling.
2. My judgment of this product is favorable.
3. I personally find this product attractive.

Related reference: Howard and Gengler (2001); [Berens](#), [Cees B.M. van Riel](#), [Gerrit H. van Bruggen](#) (2005)

Appendix D Three Items Designed to Measure a Participant's Purchase Intention

1. I will purchase this product.
2. If I were interested in buying yogurt, the probability that I would consider buying this product is extremely high.
3. My willingness to buy this product would be exceedingly high if there were no differences in the price of various yogurts.

Related reference: Grweal, Krishnan, Baker, and Borin (1998); Kozup, Creyer and Burton (2003)

THE IMPACT OF BRAND PERFORMANCE AND BRAND RESPONSE ON CONSUMER SATISFACTION: HOW DO BRAND PERFORMANCE AND BRAND RESPONSE INFLUENCE CONSUMER SATISFACTION WHEN PURCHASING BOTTLED WATER IN DURRES, ALBANIA?

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ABSTRACT

Consumer behavior is a broad and compound marketing term that deals with analyzing a customer's mindset and daily behavior. Consumer behavior is affected by several factors as the customers go through the decision-making process. The most persuasive factors are brand performance and brand response. Consequently, this study examined whether, in the case of bottled water use in the city of Durres, brand performance and brand response have a significant positive impact on consumer satisfaction. To understand and analyze these brand factors, extensive empirical research was conducted, and a survey research design method was applied among 303 individuals to produce viable results. The first hypothesis was proven successfully, through stating that there existed a moderate positive relationship between the two constructs, brand performance and brand response. The second hypothesis was accepted as it resulted in a positive relationship between brand performance and customer satisfaction with a high coefficient of beta, stating that the better the performance of the brand, the more satisfied the customers would be from the whole buying experience and inherently, their response. The last hypothesis was successfully tested by having the strongest positive relationship with the maximum value of beta. As a conclusion, each of the brand factors appeared to have a positive relationship with consumer satisfaction provided by any bottled water brand. The scope of this study is to put value on the existing related literature as well as to offer valuable advice to bottled water companies on how to develop their strategic marketing plans and undertake important business decisions.

Keywords: *Still Bottled Water, Brand Response, Brand Performance, Consumer Satisfaction, Positive Relationship.*

INTRODUCTION

Water is a natural resource, vital to the health of our human bodies. It is an essential nutrient with a huge impact on our health. Under Article 2 of the European Union (EU) Drinking Water Directive, water intended for human consumption is defined as "all water, either in its original state or after treatment, intended for drinking, cooking, food preparation, or other domestic purposes, regardless of its origin and whether it is supplied from a distribution

network, from a tanker, or in bottles, or containers" (European Parliament, 2020, pg.6). The EU focuses on its member states to supply their citizens with high-quality and safe water through its food and water legislation (Swedish International Development Cooperation Agency (SIDA), 2018). However, Albania as a non-member of the European Union, cannot yet take advantage of this opportunity.

Tap water is the type of water that is attracting great attention due to its potential for the recent increase in demand on the market. A high tendency towards consuming bottled water despite the few disadvantages it might have for a nation's domestic population has been observed lately. The mindset of the consumers has led to high sales of non-alcoholic beverages, primarily bottled water (Linden, 2015; European Parliament, 2020). Precisely, the European bottled water market reached an approximate value of \$57.2 billion in 2021 (Expert Market Research (EMR), 2022). In the context of Albania, the bottled water market segment covers 0.08 % of \$ 5.47 million revenues generated in 2022, as it is also shown in Statista's Non-Alcoholic Drinks Report. This percentage has been increased compared to other previous years, leading to a higher consumption of the bottled water in Albania (Statista, 2022).

The primary purpose of this article is to address and answer questions about customer satisfaction in the Albanian city of Durres. These questions might be able to help consumers understand the factors that influence their daily bottled water purchase intentions. Furthermore, the research focuses on understanding the relationship between the dependent and independent variables. Considering the equations created by the construct model, the brand response will be considered once as a dependent variable and then as independent one, brand performance will be considered only as independent variable, and customer satisfaction only as dependent variable. These variables were also studied by (Mosehpour et al., 2018 and Dash et al., 2021), for which the authors used the brand equity model to investigate the positive relationships formed among the variables mentioned above, using hypotheses and survey data. Knowing that each of us is a consumer in one way or another, making numerous daily purchases is a must. Hence, it is critical to understand what influences the personal purchasing decisions of the consumers in a certain market. One possible explanation could simply be the gratification of their necessities, while another could be the fulfillment of their needs and wants. A more detailed explanation regarding the reasons for bottled water consumption will be provided by answering the key question in this article.

The main research question that this study will answer is the following: ***"How do brand factors such as performance and response influence bottled water consumer satisfaction in Durres, Albania?"*** The question established for this research, the hypotheses written, and the tests performed for the study were only realized by focusing on relevant data from the previous related articles. Overall, three assumptions are built which need to be further verified. The first hypothesis is about understanding the relationship between brand performance and brand response, the second one identifies and evaluates the relationship between brand performance and customer satisfaction, and the last one, the relationship between brand response and consumer satisfaction. The hypotheses developed are mostly emphasized concerning the study's main research question.

This study covers a large contribution to bottled water-related research not only because there is a gap in this kind of research, but also because it shows the daily water purchasing behavior affected by the influence of the brand and its co-related items, such as brand factors. Besides, the companies that are part of the bottled water industry might be able to take advantage

by enhancing the customer experience through fulfilling their most physiological and nutritional needs, leading to the accomplishment of their strategic decisions, like the increase in their sales.

LITERATURE REVIEW

Previous Research in the Area

Previous research on this topic in Albania is quite limited, making this research one of the few studies that describe the influence that marketing has on our daily purchasing behavior. Three of them describe the bottled water market in Kosovo, but none is directed toward the marketing aspect of Albanian products in the same sector. The few studies that already exist, are mainly focused on describing the chemical properties, the concentration of their chemical elements in the bottled water sold in Albania. Among these studies, we can briefly mention the research conducted by Cfarku et al. (2014) and Duka et al. (2020). The first research is focused on analyzing the dietary intakes concerning the amount of calcium and magnesium concentrations in commercial bottled water sold in Tirana during 2019. The latter analyzes the concentration of gross alpha/beta activity in drinking water in Albania. Even though these articles both study bottled water, they use different approaches in analyzing it.

In a real case study in Kosovo, Kajtazi and Reshidi (2018) analyze in great detail the factors that influence customer decisions when it comes to bottled water. Two variables can affect such a choice: the urban development that the country of Kosovo is facing especially in recent years, which would result then in a decrease in the quality of tap water, and the increase in living standards of the population in Kosovo. Individuals tend to purchase heavy and expensive bottled water to live better and stay healthy (Floqi et al., 2010; Kajtazi & Reshidi, 2018).

The brand equity model, which is also known as the brand resonance model, studies the connections that customers create between a brand and a product (Keller, 2013). According to the research led by Kajtazi and Reshidi in 2018, the term "brand" is crucial since it may often describe, succinctly and rationally, the main idea or the associations that customers create about a product. The associations include the brand image that consumers may have formed and the psychological advantages that a specific product offers in terms of its quality-related characteristics. In addition to product quality, price is a significant element in deciding whether customers will purchase bottled water or not. Price is thought to have the highest influence in a native population's segment when choosing a bottled water brand. Customers' brains are wired to think that a higher price indicates higher quality. Therefore, they frequently desire high-quality goods at reasonable prices, or at the very least, a balance between price and quality. This conclusion is derived also from the study of Ismajli et al. (2013). By taking into account "Bonita" and "Rugova" bottled water brands, in a sample size of 150 individuals, the respondents agreed that the price and quality ultimately played an important role when purchasing a specific bottled water brand (Ismajli et al., 2013). As it is commonly known but also expressed in literature, consumers would identify, select, and purchase a product that would best satisfy their psychological needs and would seem fit for daily use. After this condition is fully satisfied, the regular consumers would build more trust and repeat the product-related purchasing behavior thanks to the fair pricing, and the high quality that this product has (Kajtazi & Reshidi, 2018; Pllana & Qosa, 2018).

Ismajli et al. (2013) and Kajtazi and Reshidi (2018) also focused on the packaging of water products in their study. Both studies concluded that packaging serves as a tactic to attract

the attention of the consumers and influence how they perceive a product's quality, as in the case of the “Rugova” bottled water brand. The product's value is increased when its packaging is innovative and hence satisfies their needs. Additionally, the packaging must be recyclable, easy to transport, easy to open and store. The aforementioned parameters were studied in the research performed by Kajthazi and Reshidi (2018), in a limited period of one month, on randomly selected individuals. Overall, 500 responses had been collected. Consumers tend to prefer the bottled water brand which is the most expensive and the safest. Kajtazi and Reshidi (2018) exclusively compare the costs of bottled and tap water by carefully concentrating on them. Although there is no previous literature to base this fact on, one can infer that Albanians might prioritize a more expensive bottled brand as well, similar to their fellow natives from Kosovo. The repetitive purchasing behavior that is considered in Kajtazi and Reshidi (2018) and Pllana and Qosa (2018), is an indicator of the satisfaction that a consumer obtains and the response that is received towards a specific bottled water brand. Likewise, the price and quality in (Kajtazi and Reshidi, 2018) and (Pllana and Qosa, 2018) and packaging in (Ismajli et al., 2013) and (Kajtazi and Reshidi, 2018) are crucial indicators of the performance that a bottled water company is doing on the market. The purchasing behavior and the last-mentioned aspects, serve as proof of an existing relationship between this article and the previously-mentioned ones. Since little to no research has been conducted on the factors influencing consumer satisfaction from bottled water brands, there is a limited reference point in support of this topic in Albania (Floqi et al., 2010; Ismajli et al., 2013; Kajtazi & Reshidi, 2018; Pllana & Qosa, 2018).

METHODOLOGY

Development of Hypotheses and Conceptual Framework

There are certain factors that affect the customer decision-making process in the bottled water industry. For instance, Teng et al. (2007) looked into the variables influencing consumer behavior across numerous industries. The concepts of brand feeling, brand judgment, brand performance, and customer satisfaction have been used to describe a customer's purchasing process (Kotler & Keller, 2012). This study investigates the fundamental idea behind the aforementioned brand factors and applies them to the various research hypotheses. An experimental study was conducted to prove the developed hypotheses – the components influencing the consumer's discernment concerning bottled water –as this approach permits the analyst to gather information from an expansive number of people in a restricted time outline, as well as apply quantitative methods to assess the circumstance considered, and form clearing explanations.

Moreover, the construction of the conceptual framework is based on a synthesis of two previously tested models of brand perception and purchase intention in the airline industry (Moslehpour et al., 2018) and in B2C real estate marketing (Dash et al., 2021). The assumptions made in the following conceptual frameworks—if not explicitly specified otherwise—are based on Keller's (2013) Brand Resonance Model. Customer satisfaction is a key focus in marketing, business, and academia, but brand performance, focusing on the firm's product quality, is one of the most important concerns in the literature of service marketing. Numerous studies have already established the link between brand performance and customer satisfaction as well as the influence of brand performance on customer satisfaction (Mohtasham et al., 2017). To satisfy

customers, it is therefore presumable that products must adhere to previously set product qualities.

According to the various research that supported Keller's Brand Equity Model (Çınar, 2020, Thanushan & Kennedy, 2020), the brand response is defined as the fusion of brand judgments and brand feelings. Brand response typically increases when a business can provide a service or product with added value. In reality, it can concur that comparing customers' pre-purchase judgments and emotions, or their expectations regarding a good or service provided, with what they actually experienced, results in customer satisfaction (Oliver, 2010). Brand performance, brand response, and customer satisfaction will also serve as variables in this article, contributing to the three hypotheses which will be further verified. Consequently, the following assumptions will be tested in light of the justifications presented above:

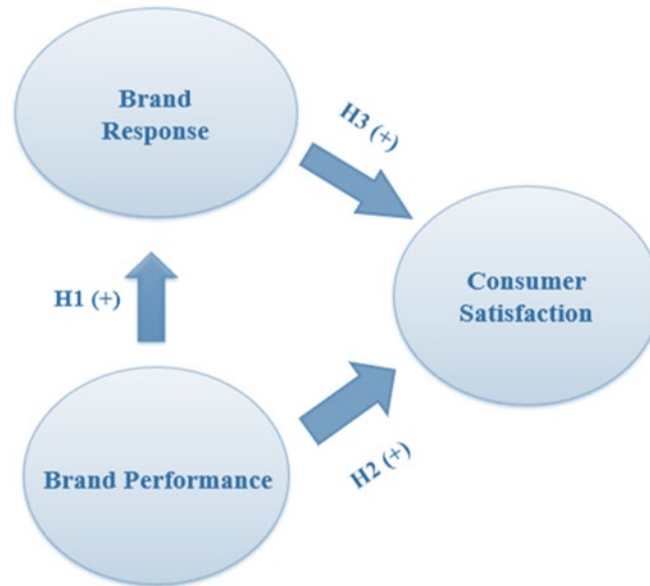
H1: Brand Performance is positively related to Brand Response.

H2: Brand Performance is positively related to Consumer Satisfaction.

H3: Brand Response is positively related to Consumer Satisfaction.

Customer satisfaction is widely acknowledged as one of the most important factors affecting a company's performance and customer retention in the competitive environment existing nowadays (Ooi et al., 2011). The scale developed by Keller (2013) was chosen as a framework to evaluate brand performance as an independent factor because it already included, at least in part, all the criteria mentioned above. Nevertheless, the Keller's model construct items only needed to be very slightly changed to make it easier for survey respondents to grasp the needed information, in correspondence to the features of bottled water. The conceptual framework model, containing the three hypotheses related to brand response, brand performance, and customer satisfaction is shown in Figure 1 below.

Figure 1
The Conceptual Framework of the Three Hypotheses for proving the relationship between Brand Response, Brand Performance, and Customer Satisfaction.



Sampling, Measurement Scale Building, and Data Collection

A survey was utilized as a research instrument in the Methodology Section for understanding how the brand response and brand performance influence the satisfaction of the customers, living in Durres when purchasing bottled water. For drafting the survey's sections and questions of this article, the authors focused on other similar research methodologies used by Shashidhar (2015) and case studies in Keller (2013). The questionnaire was conducted online using a Microsoft Form to collect data from citizens living in Durres, Albania, and it was open to everyone over the age of 18 years old.

In total, 277 of the 303 questionnaires that were distributed were indeed collected. In addition, 32 of them were eliminated after serious errors in the answer set. Finally, 245 responses were received, which may be considered adequate for this type of study, according to Parashakti and Ekhsan (2020). In addition, a pre-run of the survey was given to a sample of 30 people randomly chosen by the authors before it was finally delivered. The response rate of the questionnaire is shown in Table 1 below.

Table 1 RESPONSE RATE OF THE PARTICIPANTS			
Administrated Questionnaires	Response Rate	Non-Response Rate	Response Bias
303	277 (91,42%)	26 (8,58%)	32 (11,55%)

The questionnaire was divided into three sections: a) Socio-demographic information, b) Consumption habits regarding bottled water, and c) Branding components of Bottled Water. All the questions were evaluated using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), as suggested by Birt et al. (2017).

Socio-demographic data on age, gender, place of residence, income, and similar characteristics of the participants were included in the questions of the survey conducted. 34.76 percent of the participants were men and 64.24 percent women. The age group with the highest number of participants was 18 to 24 years old. Therefore, 38.78% of the participants were between the ages of 18 and 24, which implies that the youth might be more willing to spend time completing online surveys, especially if they cover social topics that are related to environmental causes or health. The majority of participants live in urban cities (83.67 percent). Regarding their level of education, most of the participants had completed at least one master's degree (37.55%), closely followed by participants who had only completed a bachelor's degree (33.06%). Only a small number of responders (13.47 %) came from families of low income, and the majority (60.82%) were from families of above-average-income.

Table 2 SAMPLE COMPOSITION			
Category	Feature	People	Percentage
Age	18 – 24	95	38,78 %
	25 – 34	54	22,04 %
	35 – 44	38	15,51 %
	45 +	58	23,67 %
Gender	Male	84	33,76 %
	Female	156	64,24 %
	Other	5	1,99 %
Education	High School	69	28,16 %
	Three-year degree	81	33,06 %
	Master's degree	92	37,55 %
	Ph.D.	3	1,22 %
Area	Rural	40	16,33 %
	Urban	205	83,67 %
Family Income	0-30,000 ALL	4	1,63 %
	30,001-50,000 ALL	29	11.84 %
	50,001-80,000 ALL	58	23.67 %
	80,001-100,000 ALL	54	22.04 %
	100,001+ ALL	95	38,78 %

Evaluation of Quality Reliability of the Construct Model

A statistical method that is widely used among the literature was analyzing the gathered data to define and assess a linear regression model (Bird & Karolyi, 2017). This method enables the formalization and resolution of the difficulty in comprehending the functional relationship between variables evaluated on sample data from a particular population (Wilson & Weld, 1997). Due to their versatility and the relative ease with which the researcher may understand and analyze the generated data, linear regression models are frequently used in social sciences (Wilson, 1991). Linear regressions are usually employed to estimate the expected value of some latent variables in social research, including marketing and consumer behavior, to produce reliable, trustworthy, and generalizable results.

Since the structure or number of dimensions for the considered variables under statistical analysis is not known, the factor analysis in this study was primarily employed in an exploratory type of view. Iteratively checking the reliability of the scales and their validity led to the eventual delivery of all numbers greater than the minimum acceptable threshold. Particularly, the KMO test (>0.5 , Tuan, 2020) was used to conduct the validity test. As part of the factor analysis for this research, the authors chose to use the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy, which produced a commendable value ($KMO = 0.8359$) when compared to the labels provided by Kaiser et al. (2013). The result indicated correlations between pairs of variables, or potential factors, which could be further explained by variables studied in another research.

Furthermore, Bartlett's test for sphericity was used to find the determinant of the matrix of the sums of products and cross-products, which the inter-correlations matrix was derived from. The determinant of the matrix S was converted to the chi-square statistic and evaluated for significance. According to the null hypothesis, the non-zero correlations of the sample matrix were caused by sampling error and the inter-correlation matrix came from a population with non-collinear variables (i.e., an identity matrix). The data derived from the reliability tests, conducted by the Stata Statistical Software is shown in Table 3 below.

Table 3						
CRONBACH'S ALPHA RELIABILITY TEST AND KAISER-MEYER-OLKIN MEASURE OF SAMPLING ADEQUACY FOR THE SURVEY						
Number of items in the scale	Average Inter-item covariance	Cronbach's Alpha	Kaiser-Meyer-Olkin (KMO) test	Bartlett's test for sphericity		
				Chi-square	df	p
33	0.2129	86,99 %	83,59 %	2936.158	496	0.000

Before conducting hypothesis testing, Cronbach's Alpha (CA) and the Kaiser-Meyer-Olkin (KMO) reliability tests were used to evaluate the accuracy of the study's construct model. The CA standard threshold level was 0.70 (Hair et al., 2006). For the KMO test and to qualify as AVE, values must be greater than 0.50, and the outcomes were meritorious values ($KMO = 0.665$) (Tuan, 2020). Scale dependability is required to be higher than 0.70, for showing an

acceptable level of reliability among the pair of variables (Hair et al., 2006). Looking at Table 4 below, it can be noticed that our data corresponds with the stated requirements, as the KMO test resulted higher than the threshold value of 0.50, which is also within the range declared by Tuan (2020). Precisely, the KMO test for Brand Performance resulted in a value of 0.84, for Brand Response in a value of 0.86, and Customer Satisfaction in a value of 0.83. Since all the KMO test values are greater than 0.5, the factor analysis is considered to be valid, and a high correlation between the pair of variables exists.

Regarding the CA Test, the Brand Performance differs slightly from the threshold value, which is also set by Hair et al. (2006). Nevertheless, the difference is negligible, considering that the construct items used to evaluate the Brand Performance, have a high reliability between each other, and consequently, the construct model is accurate. The other CA tests' values for brand response, and customer satisfaction, have passed the threshold value (0.7), emphasizing the idea that the constructed model seems to be the right one for delivering such viable results regarding the relationships between brand performance, brand response, and customer satisfaction, as shown in this article.

Table 4 QUALITY RELIABILITY OF THE CONSTRUCT MODEL					
Quality Measure			Std. Dev.	CA test	KMO test
Threshold Value Variable	Obs	Obs Sign		0.70 Hair et al. (2006)	0.50 Tuan (2020)
Brand Performance	245	+	0.8895	0.65	0.84
Brand Response	245	+	0.8264	0.74	0.86
Customer Satisfaction	245	+	0.8309	0.78	0.83

Hypotheses Testing

Summative scales were developed by compiling answers to several survey questions that all center on the same subject and determine a score for each observation that could be used to indicate the respondents' opinions (from high scales to poor scales) on the subject under discussion. Their goal was to quantify ideas that the authors believe differ between individuals and about which, a detailed evaluation was lacking. To establish a single variable that would be the sum of the scores on each question scaled from 1 to 5, multi-item measures were constructed by integrating responses from several questions with related replies.

Table 5
HYPOTHESIS TESTING

<i>Hypotheses</i>					Result
	β	T-test	p-value	Std. Error	
H1	0.1527	9.97	0.000	0.1905	Verified
H2	0.1862	9.98	0.000	0.0106	Verified
H3	0.2846	6.96	0.000	0.0408	Verified

To construct and test the theories mentioned regarding brand performance, brand response, and customer satisfaction, equations must be built. On the first equation, Brand Response was the dependent variable and brand performance was the independent variable. On the second equation, consumer satisfaction was the dependent variable whereas Brand Response and brand performance were the independent variables. Standardized Regression coefficients (β) between variables higher than 0.2, t-values greater than 1.96, and p-values of 0.05 or smaller were selected as thresholds for the acceptance of the hypotheses stated above.

RESULTS AND DISCUSSION

H1: Brand Performance is positively related to Brand Response.

According to Keller (2013), a positive relationship exists between the components of a brand's overall performance, i.e. the technology used, the price, and the unique features that give a brand a competitive edge in the market, and the other key variables of this analysis: Brand Response and Consumer Satisfaction. A moderately positive link between brand performance and brand response was also found when testing H1 ($\beta=0.15$). Additionally, since the p-value was lower than 0.05, the acceptability level was met. As a result, when people respond better to any brand, the better this brand performs in terms of technology, price, nutrition, availability, and advertising. How a brand satisfies particular needs daily directly represents the perceptions and feelings of a consumer, causing our conclusion related to bottled water industry to be logical and in accordance with the theoretical part.

H2: Brand Performance is positively related to Consumer Satisfaction.

With a beta of 0.18 ($\beta= 0.18$) and a p-value less than 0.05, the association between brand performance and customer satisfaction was likewise positive. Therefore, the second hypothesis is accepted, implying that customers will be more satisfied with the entire purchasing experience when the brand performs better. Inherently, if a brand's attributes are satisfying the consumer's needs, this translates into a high-quality product being sold in the market, which would, in turn, increase consumer satisfaction as they are receiving a product of higher quality. The product is being evaluated in terms of its nutritional values, mineral content, pH, technical specifications such as the technology used and ecological packaging offered, and last but not least, quality and price balance. These aspects are particularly sensitive to consumption and the satisfaction that a customer receives by purchasing and drinking a bottle of water.

H3: Brand Response is positively related to Consumer Satisfaction.

The strongest, most substantial, and most favorable correlation was found between brand response and customer satisfaction ($\beta = 0.29$). In light of this finding, H3 proves a positive relationship between brand response and consumer satisfaction. This suggests that a customer's "heart" and "brain" influence whether they are satisfied with a certain brand or not. There is also more satisfaction with the offered product if there are warm feelings associated with the brand that provides the product. However, since bottled water is not a product which could establish many feelings with the buyer, such a relationship is a little more challenging to show. Due to this fact, the customers' assessments, and opinions of the perceived value that they receive from the brands in general, will ultimately meet their demands and thus give more attention to bottled water brands. The way a customer views a brand permanently improves the quality of the product and its brand image and identity.

IMPLICATIONS FOR BOTTLED WATER COMPANIES

This study not only puts value into the existing literature but provides further advice to bottled water companies when they are about to create strategic marketing plans and make crucial business decisions. The following is a list of some of the contributions that this research could bring to the bottled water industry.

A bottled water firm's marketing manager needs to be more vigilant and cautious while choosing the best strategies for promoting the products of a company and establishing the monthly or yearly objectives. As Morgan et al. (2018) describe in their research, a marketing strategy is an integration of numerous decisions regarding a company's product, marketing resources, and the activities that assist in the creation of value for its customers. Delivering a high-quality product and providing value to the target market are two of any company's primary goals. Furthermore, the essence of the marketing strategy highly depends on the strategic decision-making process of a business such as the product it offers and the customer groups that the company aims to target.

To stand out from the competition in the market, the company must be able to put the designed strategies into action. Any firm can build a competitive advantage in the market through consistent research, financial success, and high-quality products. One of the core components of the Strengths-Weaknesses-Opportunities-Threats (SWOT) Analysis is composed of the threats that a business might face from its rivals. These threats are related to the quality, performance, and sustainability of a firm's competitors in their operating market. As a result, the bottled water company must prioritize marketing, product pricing (which must be relatively cheaper than that of its rivals), cutting-edge technology, and the products it provides to its customers (Ghasemi & Yaghmaei, 2015).

Lastly, any bottled water company must go through marketing research, which includes a further analysis of the product it is going to deliver, the innovation that will bring in its market, and the pricing structure that is going to use. The research of other similar European markets has shown that the bottled water market is mature. Therefore, further action is required as the bottled water providers must design current and new marketing plans or other techniques to increase their sales in light of the present market conditions (Carlucci et al., 2016). Since the issue of plastic and environmental contamination is now quite prevalent, bottled water firms must begin

to act immediately in order to continue providing still water and at the same time, safeguard the environment and stay competitive in their market (Marchi et al., 2020).

CONCLUSION

The purpose of this study is to determine how much of an impact the aforementioned factors (brand performance and response) have on consumer satisfaction when purchasing bottled water in Durres, Albania. This research resulted in relevant findings, the most significant of which was that there is a very strong correlation between brand performance, brand response, and consumer satisfaction in the drinking water market.

This study is one of the first empirical analyses regarding customer behavior regarding bottled water brands in Albania and opens up a wide range of possibilities for future research. Prospects include further analysis of the complexities and counterintuitive findings presented here, the requirement to investigate fresh, different, and developing contexts, such as fresh regions and industries, and the requirement to keep looking into how consumers and sellers are embracing innovative technology.

LIMITATIONS OF THE STUDY

Although the research design of this study was carefully created, it nevertheless has its own limitations. This study has been conducted for a limited period of time, specifically three months. This short period might have negatively influenced the outcome of our research. Therefore, a longitudinal study of one year or even five years could yield to more profound results.

In terms of methodology, the authors of this study were restricted to a geographical sample selection of the city of Durres rather than the entire country of Albania. A comparative study with similar regions or countries could have also been a possibility. By focusing on a larger geographical scope, the authors could get a higher response rate, and perform a more detailed research analysis, which could lead to a more profound research impact. By increasing the area of research, the reliability of the study could have also been enhanced. However, by gathering a sizable number of survey responses from the target population, the authors were able to establish a good preliminary response rate.

Following that, the questionnaire requested a substantial quantity of self-reported data, as there were a few open questions that required answers. The authors employed reverse labeled items to evaluate integrity and accuracy, and while there is no reason to assume that participants were dishonest in their judgments, it is plausible that their judgments were somewhat erroneous. With a pre-qualification study and an additional correlation analysis, the error margin could have been reduced.

DIRECTIONS FOR FURTHER RESEARCH

This study provided valuable insights into the perceptions of bottled water brands and their purchasing in the second most populous city of Albania. This can be the starting point of a more detailed analysis of this growing industry. Several opportunities for future research exist based on the study's results. First, since this study was the first one to analyze brand perceptions of bottled water and consumer behavior, future research needs to replicate this study's findings

with a different group of customers. Second, as with many studies, this one was single-regional. Future research, conducted within a singular region, would allow actual behavior data to be collected rather than examining only monolithic regions and behavior. Third, other variables could be included in the model such as actual brand performance, and consumer trust. In conclusion, this study has indicated that brand performance and brand response are the dominate factors for customer satisfaction. Consequently, future study could examine whether, other product categories in other geographical regions can show that brand performance and brand response have a significant positive impact on consumer satisfaction. We would like to encourage future research to create a better understanding and advance analysis about brand factors for producing qualified research results.

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WHICH WAY THE USERS PREFER? MOBILE BANKING OR COMPUTER ONLINE BANKING – AN EMPIRICAL STUDY

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ABSTRACT

Mobile banking has reinvented the banking industry to a new level of mobility. It is a challenge to the banking industry to better prepare for its future to meet the increasingly changing demands of its customers. This empirical study investigates bank customers' preferences between mobile banking and computer online banking and offers some insights for the banking industry to better serve its customers. The results indicate that the respondents significantly prefer mobile banking over computer online banking on several salient attributes. Specifically, the respondents believe that mobile banking, compared with computer online banking, is more reliable, dependable, accurate, and easy to carry around. The findings suggest that the market for mobile banking will continue to expand. So, there is a need for the banking industry to continue to engage its customers 24/7 and to further develop mobile banking to offer high quality services to its customers.

Keywords: Marketing mobile banking, Management of Mobile banking, Computer online banking, E-commerce, M-commerce

INTRODUCTION

American consumers started making their purchases via online banking when Internet became available more than two decades ago. At the beginning, e-commerce transactions were largely handled by computers and/or tablets, and the transactions were settled mostly via consumers' debit and/or credit cards, or directly from consumers' bank accounts. Banks were considered pioneers in the digitalization of the banking services.

Since Apple introduced smartphone (Apple, 2007), American consumers have begun using their mobile phones to handle their purchases as numerous mobile applications (APPs) became available from banks, high tech companies, and merchants. The banking industry has experienced rapid and widespread changes due to new technologies like immediate payment infrastructures and blockchains. Mobile applications are creating novel ways for banking activities where consumers can enjoy added values. Consumers' needs for value added banking services are evolving as more and more transactions have taken place on mobile phones, providing real-time, personalized, and seamless payment experiences (Komulainen & Saraniemi, 2019). The mobile banking showed an impressive growth of 41% from \$69.8 billion in 2018 to

\$98.8 billion in 2019 in the U.S. This progress was magnificent as compared with only \$12.8 billion mobile transactions in 2012. American consumers are now becoming increasingly comfortable with mobile banking technology, and this could have been a catalyst for higher mobile-commerce sales (Kohan, 2020). This shift in the mode of banking, from computers to mobile devices, is revolutionary and the subject of this research. This study is designed to gain a better understanding of the criteria or salient attributes that banking services users consider when choosing mobile banking versus computer online banking. The findings should help the banking industry to improve its services in the future.

LITERATURE REVIEW

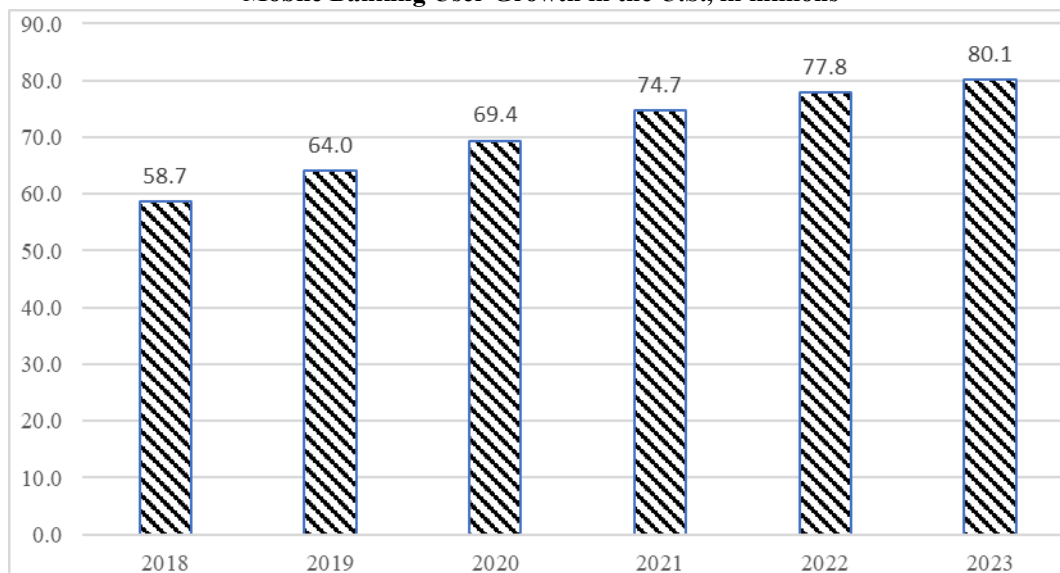
Historically, barter trades served as means of exchanges. Precious metals, like gold and silver, largely replaced barter trades. Cash, cheques and/or bank drafts became dominant methods for purchasing good and services for centuries. Around 1950s, credit cards were introduced which offered an easy way for purchase transactions. Computer online banking started around 1994 in the U.S. It offered 24/7 and remote banking service for consumers on the internet, while the transactions were largely done through credit and/or debit cards, as well as through consumers' bank accounts (Woods, 2014). The growth of computer online banking market has been robust, as it has a 35% cost advantage over a traditional bank branch, and most of the banks charge no fee for their online banking transactions (Taylor, 1999).

The mobile banking services were first introduced around 1999 in the U.S. At the beginning, it used short message service, known as SMS banking. Smartphones and Wireless Application Protocol (WAP) enabled consumers to use the mobile web to manage their banking activities (Apple, 2007). Some of the European banks quickly started to offer mobile banking platform to their customers (Mobile banking, Wikipedia, 2022).

There are about 3.5 billion smartphone users around the world currently while only about 2 billion computer/tablet users. Smartphones have been adopted by more than 85% of the US population, with a total of 276 million users (Statista, 2021). Mobile banking has kept up with growing social trends and technology, shifting to meet customer needs, and competition. As a result, consumers can conduct their banking activities via their smartphones more conveniently. Widespread adoption of smartphones has further increased consumers' E-commerce experiences (Electronic Transactions Association, 2019). Mobile banking has offered additional values to consumers in terms of ease, speed, convenience, and cost. Computer online banking offers 24/7 availability. Mobile banking provides higher mobility than computers and tablets. Younger American consumers are the driving force for the growth of mobile banking. They are motivated in part by rewards or loyalty programs offered by mobile APP providers and more ready to accept the benefits of mobile banking. At the same time, many consumers prefer traditional debit and credit card operations, and remain skeptical about mobile banking since they have persistent concerns about privacy, accuracy, and security (Kim, et al, 2018).

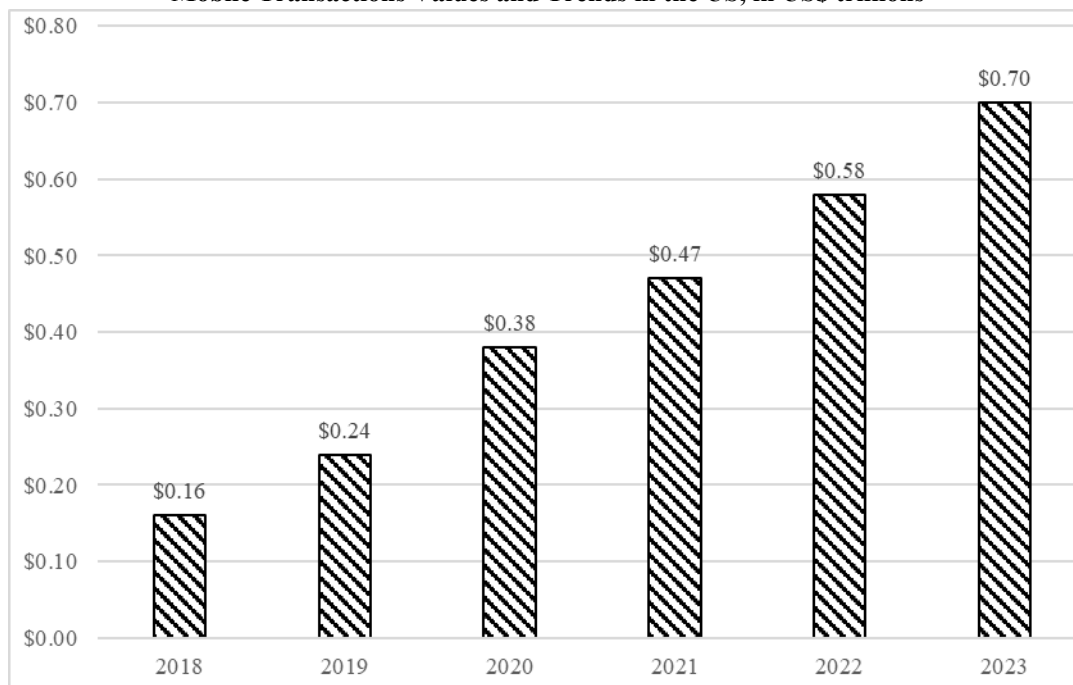
Both the number of mobile users and the value of mobile transactions have been increasing over time. Figure 1 presents the growth of mobile banking user in the U.S. while Figure 2 presents mobile payment transaction value increases in the U.S.

Figure 1
Mobile Banking User Growth in the U.S., in millions



Source: Statista report, 2021. Retrieved from <https://www.statista.com/statistics/244487/number-of-us-proximity-mobile-payment-transaction-users/>

Figure 2
Mobile Transactions Values and Trends in the US, in US\$ trillions



Reconstructed based on Statista, March 2022. Retrieved from <https://www.statista.com/outlook/dmo/fintech/digital-payments/mobile-pos-payments/united-states#transaction-value>

A noticeable difference between mobile banking and computer online banking is that smartphones are in the consumers' pockets wherever they go, while computers are mostly stationed. For overwhelming majority of mobile transactions, consumers connect their bank accounts or credit/debit cards to the mobile APPs, or funds are stored directly on APPs, such as mobile wallets or person-to-person payment APPs. Yet, the infrastructure that underpins these transactions is largely the same, both use the same underlying financial systems through which funds are guaranteed and requested—such as Visa and Mastercard networks, which enable credit/debit card payments. The Automated Clearing House together with paying banks, processes, facilitate and direct transfers between depository accounts. The payments are subject to all the protections against frauds and losses of funds. Prepaid cards also provide protections against unauthorized charges and ensure that consumers have the right to dispute such transactions (The Pew Charitable Trusts, 2019).

Some researchers have investigated mobile banking in the developing countries. Trabelsi-Zoghalmi, et al. and Shankar, et al. examine the service quality in mobile banking using generic service quality scales to ascertain the most appropriate one in India. Their study collects views of mobile banking users and concludes that no measurement scale is suitable to measure mobile banking service quality. Nevertheless, their study provides the managers of financial institutions with some clear insights into consumers' service quality expectations of mobile banking (Trabelsi-Zoghalmi, et al., 2018; Shankar, et al., 2019). The research conducted by Shankar, et al. also evaluates the mobile banking service quality issues in India (Shankar, et al., 2020). The work by Baabdullah, et al. concentrates on mobile banking adoption in Saudi Arabia. Perceived privacy and perceived security are the two major factors that affect user adoption of mobile banking (Baabdullah, et al., 2019). Mouakket investigates mobile payment quality characteristics in the United Arab Emirates. The study concludes that system quality, information quality and service quality can influence expectations about performance and effort of this technology (Mouakket, 2020). Shams, et al. center on customer's adoption of mobile banking that portrays tremendous growth in Iran. Their study explores the customer's mobile banking experiences and expectations among different generations X, Y, and Z. Their methodology is through in-depth interviews of active users of mobile banking services with a generational split in Iran (Shams, et al., 2020). Mostafa investigates the potential effects of mobile banking service quality dimensions on customers' value co-creation intention (CVCCI) in the banking sector in Egypt (Mostafa, 2020).

Glavee-Geo, et al. survey 595 mobile banking users in Ghana. Their study highlights the implications of mobile money services to business and marketing/service managers, policy makers, non-banking entities, such as telecoms and financial technology firms, and to the society in general. They provide important insights into how service providers can manage consumer engagement process and formulate marketing strategies to target and promote this simple, but innovative service to consumers. They discuss the societal implications of the study in Ghana and recommend several options for future studies to stimulate the research agenda on general mobile banking (Glavee-Geo, et al, 2019).

The above studies on mobile banking provide useful insights and indicate that factors or salient attributes such as quality, accuracy, security, and privacy are of concern to banking services users. Other researchers have also studied mobile banking related features. Shankar, et al. explore the key dimensions of mobile banking service quality. They use two qualitative methods for their data collection, i.e., focus group, and in-depth interviews. Their results demonstrated that privacy, security, customer support, interactivity, efficiency, and content were the key quality dimensions. They believe that their findings provide useful insights for developing mobile banking service quality. Practically, the findings will help banks understand consumers' expectations, and provide directions for improving quality of m-banking services (Shankar, et al., 2020).

Forrester Research predicted in 2015 that mobile wallets would become a marketing platform by 2020, with expectation of growing adoption. Yet, this prediction is not currently materializing. The U.S. mobile banking facilitators, like Apple Pay or Google Wallet have not yet offered any platform rich enough to engage American consumers. In fact, Apple Pay was losing its customers. The authors of this research wonder why and what mobile banking facilitators need to know to improve their services for American mobile banking customers (Augustine, 2018).

In summary, the review of literature provides a wide range of aspects of American consumers' perceptions for mobile banking. This empirical study investigates American consumers' preferences in their banking activities between mobile banking and computer online banking. This should generate insights in terms of effectiveness, efficiency, and service quality issues. The findings of this study offer useful insights to marketers in their future marketing endeavors.

METHODOLOGY

This study focuses on American consumers' preferences for mobile banking with respects to the effectiveness, efficiency, and quality of mobile banking vs. computer online banking. A survey questionnaire was designed to identify and investigate those issues that were important for the consumers and banking industry.

Salient Attributes of Banking

Research Question 1: What are the salient attributes of banking?

The literature review identified eleven salient attributes of banking (Augustine, 2018; Baabdullah, et al., 2019; Chao & Dubas, 2022; Glavee-Geo, et al, 2019; Kim, et al, 2018; Mostafa, 2020; Mouakket, 2020; Shankar, et al., 2019; Shankar, et al. 2020; The Pew Charitable Trusts, 2019; and Trabelsi-Zoghلامي, et al., 2018) as given below.

1. **Reliability**
2. **Dependability**
3. Help **accurately** manage my account activities
4. Help **safely** manage my account activities
5. **Security** for transactions
6. **Easy to use**
7. Help me **timely** manage my accounts
8. It is **convenient** for making payments and/or transfer money
9. It is **easy to carry** around for my banking activities
10. Provides **free transactions** for me
11. I feel more **comfortable** to use

Mobile Banking vs. Computer Online Banking

Next, two modes of banking are evaluated on the above eleven salient attributes.

Research Question 2: How do mobile banking and computer online banking compare in terms the salient attributes of banking?

This research question was answered by performing eleven paired t-tests to compare banking users' evaluations of mobile banking and computer online banking on eleven salient attributes

Sample

The targeted sample respondents were college students in a large university in the northeast of the U.S. One-page survey questionnaires were distributed to target respondents, specifically with the aim of obtaining the opinions of the respondents who are often exposed to both computer online banking and mobile banking.

Hypotheses

The null hypotheses state that there is no significant difference between the respondents' ratings of mobile banking and computer online banking for all eleven salient attributes of banking. The alternative hypothesis state that there is a significant difference between the respondents' ratings of the two modes of banking for all eleven salient attributes of banking. These eleven alternative hypotheses are given below:

*Hypothesis 1: There is a significant difference in **reliability** between mobile banking and computer online banking.*

*Hypothesis 2: There is a significant difference in **dependability** between mobile banking and computer online banking.*

*Hypothesis 3: There is a significant difference in **accurately managing** banking activities between mobile banking and computer online banking.*

*Hypothesis 4: There is a significant difference in **safely managing** banking activities between mobile banking and computer online banking.*

*Hypothesis 5: There is a significant difference in **securely banking transactions** between mobile banking and computer online banking.*

*Hypothesis 6: There is a significant difference in **easiness for users** between mobile banking and computer online banking.*

*Hypothesis 7: There is a significant difference in **timely** fashion in managing user accounts between mobile banking and computer online banking.*

*Hypothesis 8: There is a significant difference in **conveniently** making payments and/or transfer money between mobile banking and computer online banking.*

*Hypothesis 9: There is a significant difference in **easiness for carrying** device around for banking activities between mobile phone and computer online banking.*

*Hypothesis 10: There is a significant difference in the **users' transaction fees** between mobile banking and computer online banking.*

*Hypothesis 11: There is a significant difference in **user's comfortability** between mobile banking and computer online banking.*

The respondents were asked to give their preferences over these paired variables: mobile vs computer online banking. A five-point Likert scale is applied, with 5 = strongly preferred, 4 = preferred, 3 = neutral, 2 = not preferred, 1 = least preferred. So, the paired *t-test* is appropriate to test if there is a statistically significant difference in respondents' preference between the two modes of banking. If the significance level is less than or equal to 5%, then null hypothesis should be rejected since there is support for the alternative hypothesis (Conover, 1980; Davis & Cosenza, 1985; Hamburg, 1977; IBM SPSS, 2021).

RESULTS

Seven hundred twenty questionnaires were distributed to college students and staffs in a large university in the northeast of the U.S., of which two hundred fifty-two were returned and used in the study. This represents thirty-five percent response rate. Table 1 presents demographic information about the respondents.

Table 1
Background Information of the Respondents

Age	Frequency	Valid Percent
<18	35	13.9
19-35	214	84.9
36-50	3	1.2
Gender		
Male	129	51.2
Female	123	48.8
Family income		
<\$35k	31	12.3
\$35-50k	40	15.9
\$50-70k	52	20.6
>\$70k	129	51.2
Education level		
College	238	94.4
Graduate	14	5.6
Marital status		
Married	41	16.3
not married	211	83.7

Table 2 presents respondents' years of using mobile banking and computer online banking.

Table 2
Respondents' Experience with Mobile Banking and Computer Online Banking

Years using mobile banking	Frequency	Valid Percent
1 yr	16	6.3
2 yrs	70	27.8
3 yrs	93	36.9
>4 yrs	73	29.0
Years using computer online banking		
1 yr	20	7.9
2 yrs	85	33.7
3 yrs	78	31.0
>4 yrs	69	27.4

Table 3 shows *t-test* results. Nine out of the total eleven null hypotheses were rejected since their significance levels were less than 5%. So, the respondents' indicated significant differences in their preference between mobile banking and computer online banking on these nine salient attributes. The significance levels more than 5% for two hypothesis tests so for these two attributes, the respondents were indifferent between mobile and computer online banking.

Table 3 The Paired t-Tests: Compare Mobile Banking vs. Computer Online Banking					
Salient Attributes	<i>u</i> diff.	<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	<i>Result</i>
1. It is reliable to manage my banking activities on phone	0.190	3.209	251	<u>0.002</u>	Supported
2. It is dependable to manage my banking activities on phone	0.108	2.054	250	<u>0.041</u>	Supported
3. It is accurate to manage my banking activities on phone	0.282	5.267	251	<u>0.000</u>	Supported
4. It is safe to manage my banking activities on phone	0.127	2.215	251	<u>0.028</u>	Supported
5. It is secure to manage my banking activities on phone	0.044	0.746	250	0.456	Not Supported
6. It is easy to manage my banking activities on phone	0.357	5.705	251	<u>0.000</u>	Supported
7. It is timely to manage my banking activities on phone	0.337	4.945	251	<u>0.000</u>	Supported
8. It is convenient to manage my banking activities on phone	0.448	6.937	251	<u>0.000</u>	Supported
9. It is easy to carry my phone around to manage my banking activities	0.889	9.423	251	<u>0.000</u>	Supported
10. It is free to manage my banking activities on phone	0.159	1.830	251	0.068	Not Supported
11. It is comfortable for me to manage my banking activities on phone	0.425	4.712	251	<u>0.000</u>	Supported

MANAGERIAL IMPLICATIONS AND RECOMMENDATIONS

The paired *t-test* results rejected nine out of the eleven null hypotheses; therefore, the study concludes that there are statistically significant differences from the respondents' viewpoints between mobile banking and computer online banking in these nine hypotheses. A look at Table 3 indicates that all effect sizes (representing mean differences) and *t*-values are positive. This indicates that respondents preferred mobile banking over computer online banking in terms of their *reliability*; *dependability*; help in *accurately managing user account activities*; *safely managing user account activities*; *easy to use*; *timely managing user accounts*; *convenience in making payments and/or transferring money*; *ease of carrying around* for banking activities; and *feeling more comfortable*. Users preferred mobile banking over computer online banking on nine salient attributes because of advancement in mobile APP technology and acceptance of mobile banking at merchants' sites.

Thus, mobile banking has emerged as a formidable way for consumers' banking activities, as it offers not only reliable, dependable, accurate and safe transactions, but also is easy to use and to carry around for consumer to manage their banking activities in a timely fashion. Moreover, the respondents favor mobile banking for making payments and/or to transfer money rather than using their computer online banking as many respondents indicated that they carry their smartphones in their pockets and can manage their banking activities more conveniently. In addition, some of the respondents said that they can be informed in a timely fashion of the important banking activities at anytime and anywhere.

It is worthwhile to note the support for *Hypothesis 9: It is easy to carry around for my banking activities* since the respondents prefer using mobile phones over stationed computers. Mobile banking offers flexibility and convenience that computer online banking may not offer, as consumers cannot carry their computers and make the payments where they go. Through mobile banking APPs, geographical barriers are no longer as limits for consumers to conduct their banking activities. This convenience also helps other consumers activities such as selling products online, transferring money to family or friends overseas, and accessing their banking accounts while traveling. Mobile fintech allows consumers to make transactions on the go and consumer can quickly stop potential fraud or rectify a mistaken transaction. These transactions are also easy to view on mobile applications since customers can have real-time access to their bank accounts and recent transactions. All these materialize the banking activities into consumers' palms.

This study did not provide support for two hypotheses: *5. Security for transactions*, and *10. Provides free transactions for users* between mobile and computer online banking. For *Hypothesis 5. Security for transactions*, the respondents expressed that they equally preferred both mobile banking and computer online banking. They also stated that both credit/debit card issuers, banking industry, as well high-tech companies, like Apple, keep improving their infrastructure for more secured transactions. They also say that to a large extent it is the IT infrastructures that provide secured transactions. For *Hypothesis 10. Provides free transactions for users*, the respondents, as consumers, do not pay for the transaction processing fees, while the merchants (for the most part) and banking industry bear the transaction costs. Such transaction processing fees range between 1.3% to 3.4% can be burdensome to merchants particularly. The lack of support for these two hypotheses may **not** suggest that the banking industry can keep escalating transaction fees. Some respondents indicated that merchants were less likely to accept some bank cards like the American Express, than other cards.

From traditional face-to-face banking to computer online banking and to mobile banking, the banking industry is being reinvented to a new dynamic level during the pandemic in 2020. Processing payments becomes an essential source of revenue for financial institutions, and it also helps consumer engagement during the transactions when physical mobility is restricted. On the other hand, the pandemic has slashed payment revenues due to sharply curtailed economic activities. The findings suggest that mobile banking will continue to expand its usership as the continuous improvements of mobile APP technology and growth of smartphone user population in the U.S. At the same time, both mobile banking and computer online banking will continue to accommodate each other for a better consumer digital banking experience. The banking industry continues to push the mobile banking further and engage their customers 24/7.

LIMITATIONS AND FUTURE RESEARCH

This study reveals the preferences between mobile banking and computer online banking. The results offer some glimpses for the banking industry as how the consumers can be better served. Due to the preliminary and exploratory nature of this research, however, caution should be exercised when trying to generalize the results of this study.

This study has several limitations:

1. The sample size is small.
2. Not all mobile and computer online banking features are explored. For example, features like handling mortgage transactions, borrowing loans, and several payment related matters are not considered here.
3. The respondents are mainly college students who naturally cannot represent the general population, i.e., their banking activities are usually narrow in scope as they are mostly part-time workers and earn less money than full-time workers.

A comparative study of mobile banking between USA and some developing countries, like China, India, or other Asian countries, may offer insights about the future of global mobile banking. Surane and Cannon (May 23, 2018) note that most payments go through consumers' credit/debit cards in the U.S., whereas in China, mobile banking is more effective and efficient. In China, some big IT giants are the driving engines for mobile payments. Ant Group's Alipay and Tencent's WeChat Pay, respectively, have 520 million and over a billion active monthly users in the world. These IT giants serve as facilitators and intermediaries to connect consumers, banks, and merchants. These transactions use two dimensional codes (QR) for processing and verification and lead to disintermediates of banks and credit card issuers from payment transactions. This deprives banks and credit card issuers of an important and long-standing source of revenue. The mobile banking payment users link their mobile wallets with service providers' payment system and the bank accounts for payment transactions. When the consumers make purchases, the merchants use their smartphones to scan consumers' QR codes or vice versa, the mobile payment system providers transfers payments either from mobile wallets or from consumers' bank accounts to the merchants. Credit cards are not involved for the transactions. In addition, the mobile payment systems may also offer their customers credit lines so that the users can charge their purchases on their credits without plastic credit cards. These operations offer a highly effective way to increase in-store conversion rates and serve as channels for future engagements between consumers and merchants. For example, mobile wallet's dynamic nature means marketers can reactivate or update a pass remotely once it's installed; they can add the latest offers or notify users of a flash sale. These mobile payment systems charge transaction fees of about 0.3% of the purchased amount, as compared to about 3% by many credit card companies in the U.S. and other parts of the world. As a result, the merchants enjoy low processing costs that translate to their bottom lines (Mosteller, 2020).

The academic research on mobile banking and computer online banking is still limited and the banking industry still needs to know how to serve their customers better. This study indicates that future research should be in the areas of mobile banking quality and security that are the keys for the future growth of mobile banking. Further in-depth research should delve more into the factors and elements that predict the effectiveness and efficiency of mobile banking and computer online banking. Would consumers eventually abandon using their computer online banking in the future, as some of the respondents commented that they only use their smartphones to manage their banking activities? Does the younger generation differ from the older generation since younger people spend more time on their smartphones? Will the

plastic credit/debit cards disappear or eliminated in the future? What do the financial institutions need to prepare and conduct business when transactions occur in a cardless future market?

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THE BENEFITS OF TELEWORK AND A STRATEGY FOR SUCCESSFUL IMPLEMENTATION

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ABSTRACT

The purpose of this paper is to present the benefits of telework for businesses and outline a four-point deployment strategy comprised of preparing the required infrastructure, fostering employee engagement, mitigating the risks, and developing a clear communication plan. This four-point deployment strategy is designed to assist organizations in developing a post-Pandemic remote work strategy. Furthermore, this paper provides the strategic relevance of telecommuting and presents a plan for implementation.

This paper is significant because it argues that telecommuting is an environmentally sound practice for gaining a competitive advantage. In addition, telework offers a work environment protecting the employee and organization in times of crisis while also having a positive impact on the environment. Additionally, two phenomena that emerged after the pandemic include, “the great resignation” and “quiet quitting” which seem to be fueled by employees’ desires for more work-life balance and are contributing to increases in remote work. Access to talent and the ability to retain talent are benefits of telework contributing to competitive advantage. Furthermore, the cost savings related to telework is another strategy to assist organizations in the post-Pandemic economic environment. The advances in the technology available to businesses including access to the Internet and cloud computing are necessary for telework to be successful. Therefore, a solid framework for embedding telecommuting strategically is needed to ensure the long-term satisfaction and success of telework for both the employer and employee.

This paper is significant because it contributes to the business strategy and sustainability literature by providing a prescriptive approach to implementing a workplace practice, of telecommuting to improve operations. The future of telework will be dependent on businesses’ strategic implementation. While flexible work arrangements such as remote and hybrid working have been around for years, their significance has grown since 2020 due to the global COVID-19 pandemic. Research indicates that telework has benefits for both the employer and the employee. Some of the benefits of telework are work-life balance, flexibility, increased cash flow, higher morale, and climate change. However, such a strategic change in the way a company conducts business needs an appropriate infrastructure, the right culture, the ability to

communicate, and methods to mitigate risks. The four-point deployment strategy presented provides a roadmap for this post-Pandemic strategic change.

Keywords: Employee Satisfaction, Cost Savings, Sustainability, Remote Work, Work-from-home, The Great Resignation, Quiet Quitting, Cash Flow, COVID-19, post-Pandemic, Technology

INTRODUCTION

Telecommuting, or other various names such as telework or alternative workspace, is the practice of working at home or in other remote locations outside the office. Initially used for disaster recovery cases to ensure employees would be able to work in case of natural disasters, the Covid-19 pandemic forced businesses that may have previously hesitated to engage in telecommuting. While many businesses may be planning to return to their original in-office arrangements once the pandemic subsides, there are a variety of reasons why they should reconsider.

Examples of some of the benefits are reduced costs, flexibility, productivity, efficiency, and reduction of greenhouse gasses (Atoufi, et al., 2021; Tremblay & Thomsin, 2012). Intrinsic benefits to the employee consist of more autonomy, a better work-life balance, and higher morale (Abrams, 2019; Church, 2015; Morgan, 2004; Rupietta & Beckmann, 2018). In 2009, Nairn noted that IBM stated 42% of its employees do not regularly come into the office saving \$10 million annually in real estate expenses. More recently, *Business Insider* reported that IBM plans to have 80% of its employees working remotely post-pandemic (Sonnemaker, 2021). This is significant considering Global Workplace Analytics's estimated savings of \$11,000 per employee working two to three days a week remotely (Kidwai, 2022).

While a trending practice already, the global COVID-19 pandemic has emphasized the importance of being able to work remotely. At the onset of the Pandemic, many businesses were able to pivot to working from home quickly due to the wide availability of mature virtual presence platforms such as Zoom, WebEx, and Microsoft Teams. The transition was helped by the abundance of modular cloud computing resources as well as by the ongoing race between many technology giants to dominate the virtual presence market (Ilhan, 2021). Minimizing personal contact and social distancing has become the new normal, and many corporations have struggled to implement these measures while either remaining operational or sustaining productivity. A benefit of telecommuting particularly during the pandemic era is to remain operational and give employees the security of their careers and wages during such trying times. Statistics from the *Monthly Labor Review* in June 2020 illustrated the importance of telecommuting by finding between February and April 2020, employment in areas where telework was not feasible fell by 15% versus 7% (Dey et al., 2020). Dey et al.'s study also showed there were even larger disparities in certain industries such as information technology, where employment fell 37% when telecommuting was not present versus only 2% of those who were able to telecommute.

As many businesses struggle to recover from the economic fallout of forced close-downs during COVID-19, labor market shortages are slowing progress for some industries (Ferguson, 2022). Continuing concerns related to labor shortages are related to two current phenomena, “the great resignation” and “quiet quitting” (Ferguson, 2022; Hetler, 2022; Liu, 2022). Recruiting new employees and re-engaging with the “quiet quitters” will require employers to offer incentives such as flexible work arrangements. Thus, the trend toward remote and hybrid work appears to be a must for business survival. Thinking strategically about the implementation of permanent remote and hybrid work arrangements will allow businesses to reap their benefits and navigate their challenges.

LITERATURE REVIEW

Employee Satisfaction and Productivity

Fuller (2016) defines productivity as “the amount of value produced divided by the amount of cost (or time) required to do so,” (para. 1). Whereas contributing factors such as employee morale, efficiency, and automation are enhanced by telecommuting. Employees were more content and productive working from home by measuring self-rated job performance, job satisfaction, and creative performance higher than those at the office (Vega et al., 2015). Westfall (2004, p. 95) found that companies could see a 20% gain in productivity from telecommuting one day a week.

Research indicates that employee satisfaction can increase employee productivity (McKee, 2014). Vega et al. (2015) found that employees who work at home or in other areas autonomously feel more independent and less stressed thus resulting in innovation and efficiency gains. Their results showed that employees who worked most of the time at home reported higher job satisfaction, and higher self-rated performance, and performed better on creative problem-solving tasks. Mayer (2016) also reports higher perceived happiness and self-worth for those who work from home compared to traditional workers. The psychological impact should be noted and taken into consideration.

Many employees struggle with work-life balance, and by telecommuting, employees have more flexibility to address home needs with less work disruption (Gálvez et al., 2020). Rather than having to take off early to get to a doctor’s appointment or another errand, a telework employee could complete these tasks during lunch. For many employees, cutting out the commute could save hours daily which can be used for satisfying other needs. Telework enables those with family care responsibilities to be more actively engaged in their work because they no longer have the conflict of deciding which priority to address (Lenahan, 2016). Galvez et al., (2020, p. 3583) affirm that “the success of telework as a measure for achieving work-life balance establishes productive harmony between the individual, the organization, and the community.”

Firms realize greater access to talent because they can hire on a national or global level. In addition, the firm becomes more attractive to potential employees by creating a work-life balance opportunity. When workers have a work-life balance, worker loyalty increases (Chimote & Srivastava, 2013; Dizaho & Othman, 2013; Meenakshi et al., 2013). Therefore, open positions

are filled quickly without relocation expenses, and overall training costs are reduced. Employees leaving firms due to a lack of work-life balance is a widely accepted truth.

Cost Savings

While productivity is a key determinant in the argument for telecommuting, there are cost savings to be found as well. Companies increase their cash flow with the reduction of expenses, thus allowing the company to remain operational (Vafin, 2021). The more profitable the company, the more opportunity to improve employees, and the community, and contribute to social responsibility. A 2017 study by the American Economic Association found employees would take an 8% reduction in pay to work from home (Mas & Pallais, 2017). According to *CPA Practice Advisor*, an accounting firm's total expenses range from 20-25% of revenues, not including salaries and benefits (Rosenberg, 2014). If non-depreciable overhead expenses, such as utilities, can be reduced, these can result in an immediate increase in cash flow. The Controller's report found Sun Microsystems saved \$68 million annually on real estate costs, \$3 million a year in energy, and \$25 million a year in IT costs ("Compensation," 2010). All savings were made possible by allowing employees to work from home. This same article estimated companies could save around \$10,000 a year per employee ("Compensation," 2010).

Another cost saving with the implementation of telecommuting is office space. For example, Cisco closed 239 buildings over five years, reducing \$196 million in expenses and adding \$294 million to building sales (Wright, 2017). Many organizations own, build, or lease physical locations. Additionally, there are maintenance, insurance, utilities, and other related costs to occupying a property. Telework eliminates this cost by allowing the employee to utilize their home - essentially shifting the responsibility of office space to the employee though many organizations cover this expense. With fewer employees in the office, the need for large depreciable assets may decrease, including office buildings, large office equipment, and furniture. By reducing the commercial real estate square footage, rent, insurance, custodial services, and utilities are also reduced. Most physical offices cannot be reduced in size immediately, however, a plan to move in this direction will be motivation for future cost savings.

A simple yet conservative model of a small firm of 50 employees working 40% remotely, assuming a 10% increase in productivity, 15% reduction in office space, 20% reduction in absenteeism, and 10% reduction in voluntary turnover provides approximately \$370,000 savings to the organization and \$2,100 savings to each employee (see Figure 1) (Global Workplace Analytics, 2020). The *Telework Savings Calculator-Lite* from *Global Workplace Analytics* is free and practitioners may use this tool when considering telework implementation. The Global Workplace Analytics website provides multiple calculators to assist organizations in decision-making (<https://globalworkplaceanalytics.com/standard-calculator>).

Figure 1: TELEWORK SAVINGS

Global Workplace Analytics
Telework Savings Calculator- Lite™
From Global Workplace Analytics' ROI Workplace Calculator Toolkit

Enter Assumptions:

What is your total number of employees?

How many days a week, on average, will they telecommute?

How much do you expect telecommuting to:

- Increase in productivity (%)
- Reduction in office space (%)
- Reduction in absenteeism (%)
- Reduction in voluntary turnover (%)

How many days per year are the majority of employees unable to work due to unforeseen weather, traffic, or other temporary impediments?

Click on the menu tabs above for:

- Details about this calculator
- Contact information
- More free calculators and resources
- Obligatory disclaimer regarding the use of this calculator

Here is the Annual Impact an Employer Can Expect:

Increased Productivity	\$187,500
Real Estate Savings	\$58,050
Reduced Absenteeism	\$42,339
Reduced Turnover	\$19,406
Improved Continuity of Operations	\$64,804
Total Organizational Impact from Above (per year)	\$372,099
Impact Per Telecommuter (per year)	\$7,442

Here is What a Typical Employee Can Expect to Save Each Year:

Savings in travel, food, parking, and dry cleaning	\$2,142
Time saved by not commuting (equivalent workdays)	9.2

Here are the Annual Environmental and Community Impacts

Gas Savings (gallons)	3,928
Greenhouse gas reduction (equivalent to cars)	6
Cost of traffic accidents	\$11,000

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CALCULATOR

Environmental and Community Impact

Atoufi et al. (2021), describes COVID-19 as a “double-edged sword” for the environment due to increased waste from personal protective equipment (PPE), but also reductions in carbon emissions due to less commuting. Telework has been promoted even before the Pandemic for the benefit of reducing carbon emissions (Fu et al., 2012). The Environmental Protection Agency estimates "a typical passenger vehicle emits 4.6 metric tons of carbon dioxide per year" (Environmental Protection Agency, 2018). Recent research has confirmed carbon emissions decreased worldwide as a result of less commuting during the onset of the COVID-19 Pandemic; and telecommuting can continue to have a positive impact (Tollefson, 2021). For a small business with 50 employees, an estimated 3,900 gallons of gas could be saved, which is the equivalent of six cars being removed from the roads. In addition, \$11,000 could be saved by reduced traffic accidents (Global Workplace Analytics, 2020). Employees would see a reduction in automobile insurance costs because of fewer traffic accidents and miles driven.

Sharing office spaces, or “hoteling” is one way that businesses cut down on physical space (Ansio et al., 2020). Employees can realize personal cost savings on transportation, car insurance, and fuel. Reducing office space and commutes to work, results in a smaller business

footprint which has both cost and environmental benefits. Other community benefits include reductions in vehicular accidents and traffic providing a residual benefit by lessening drive times and pollution.

Traffic-related air pollution is associated with many cardio and respiratory health issues such as asthma, reduced lung function, and heart attacks (Matz et al., 2017). Implementing telecommuting would virtually eliminate many drivers while delivering benefits to all biological life, on top of eliminating unnecessary costs. These are just some of the environment benefits from telework (Strain, 2019).

Technology Enablers

Change can be perceived as hard, but one of the few positives from the COVID-19 pandemic is businesses were pushed to innovate, adapt, and persevere. Companies have been forced to do business differently and moving forward, companies will need to decide which innovations to keep in pursuit of long-term competitive advantage. The U.S. Office of Personnel and Management (OPM) reported that they hope to increase the number of remote workers significantly by leveraging the CHIPS Act of 2022 which has allotted significant funds for improving technology in America (Heckman, 2022). In North America, 94.6% of households have access to the Internet (Table 1), while the world's total is 62% connected (Internet-World-Stats, 2020). The abundance of access to the Internet allows North America's population to utilize the connectivity to work from home. Similarly, mobile broadband subscriptions in the Americas are slightly over 100%, compared to 97.4% in Europe, 89% in the Asia Pacific, and 34% in Africa (Internet-World-Stats, 2020). Some parts of the world face connectivity challenges, such as stable connections. However, the Broadband Commission for Digital Development—a co-establishment by the International Telecommunication Union (ITU) and the United Nations Educational, Scientific and Cultural Organization (UNESCO)—has an advocacy target by 2025 for all countries to have "a funded national broadband plan or strategy, or include broadband in their universal access and services definition." (Internet-World-Stats, 2020).

Table 1: INTERNET PENETRATION RATE BY GEOGRAPHICAL REGION	
Geographic Area	Population with Internet Access (%)
World Average	58.7%
North America	94.6%
Europe	87.2%
Latin America/Caribbean	70.5%
Middle East	69.2%
Oceania	67.4%
Asia	53.6%
Africa	39.3%

Source: 2020 Internet usage and populations statistics <https://www.internetworldstats.com/stats.htm>

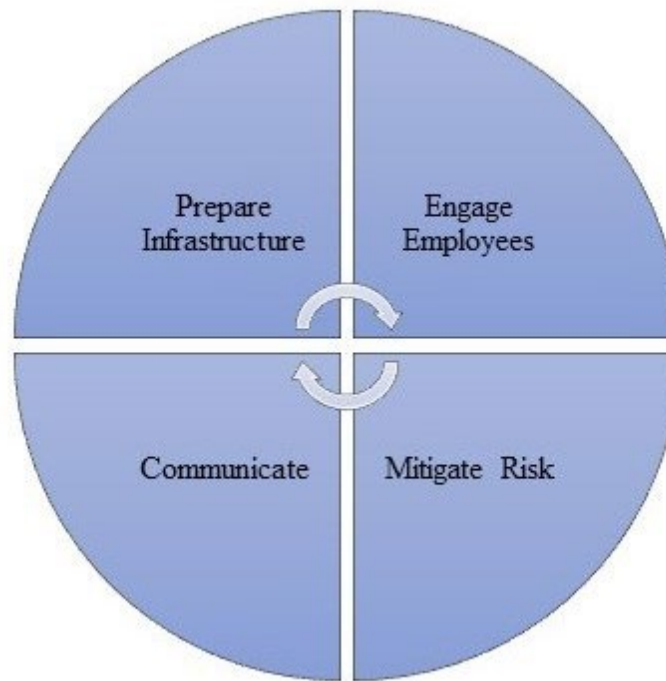
Coupled with the proliferation of access to the Internet, the fast growth of cloud computing enabled users to seamlessly access the employer's information systems directly. Moreover, working from home was further boosted by the high growth rate in video conferencing

Strategic Implementation of Teleworking

While many businesses may be planning to return to their original in-office arrangements once the pandemic subsides, there are a variety of reasons why they should reconsider. Businesses should not look at telecommuting as mandated by the pandemic but rather treat it strategically as an opportunity to gain a competitive advantage (Shah & Manna, 2020). Businesses should strategically implement telecommuting to become more efficient in terms of reduced costs, flexibility, and productivity.

In 2020, the Government of Ireland mandated that post-COVID, at least 20 percent of government workers would continue to work remotely (O'Dea, 2021). The government report stated that more remote work would lessen commuting resulting in fewer gas emissions, promote work-life balance, provide more job opportunities for people with disabilities as well as caregivers, and increase investments in small towns and villages across Ireland. In the report, Making Remote Work National Remote Work Strategy prepared by Ireland's Department of Enterprise, Trade, and Employment, a three-pillar strategy was presented. These pillars are creating a conducive environment for remote work, developing and leveraging a remote work infrastructure, and building a remote work policy (Government of Ireland, 2020).

Building on the Government of Ireland's strategy for implementing a three-pillar government employee remote work strategy, we propose a four-point telework strategy. Figure 2 below presents this strategy to create a sustainable telework plan for business organizations. The four-point strategy involves the preparation of the company's infrastructure, engagement of employees, mitigation of risks, and communication.

Figure 2: THE FOUR-POINT TELEWORK DEPLOYMENT STRATEGY

Prepare Infrastructure

In their study of the U.K. infrastructure sector, Jallow et al. (2021), propose several recommendations from lessons learned during the COVID pandemic. One recommendation is that management be open to changes and prepared for a culture shift due to remote work. “Change and dynamic relationships are integral to business systems, and the culture of an organization plays a vital role in driving the behaviours and attitudes that support rather than hinder change” (Jallow et al., 2021, p. 591). One lesson learned for many organizations was that neither their existing infrastructure nor the internet was prepared to support a significant shift to remote work (Feldmann, et. al., 2020). For an organization to effectively utilize teleworking, it should make the appropriate technology and software available. Currently, many businesses use virtual meeting software such as Zoom, WebEx, and Microsoft Teams, as well as virtual private network software (Grand-View Research, 2020). Employees should be trained on how to use the software. In addition, the business should invest in employee equipment such as Internet phones and ergonomic equipment. Equipping and/or compensating employees for wired or wireless, high-speed Internet as needed is also an important infrastructure investment.

A business whose information technology (IT) infrastructure is cloud-based faces fewer challenges (Adamuthe & Thampi, 2020). Therefore, a business considering the deployment of teleworking should consider migrating its IT services to the cloud as a prerequisite. Other investments can be made in VPNs to ensure cyber security and technology training.

Foster A Culture of Engagement

Engagement plays an integral role in employees' attitudes and can be reflected in their work. Engagement contributes to employees' psychological well-being, leading to lower absenteeism, better services provided to customers, and higher contributions to productivity and profitability (Rothmann & Baumann, 2014). With a physical location change, a focus from physiological needs should shift to psychological needs (Sako, 2021). While an employer may provide water, snacks, and a consistent temperature in the office to assist employees, telework employees may require more engagement and communication to enhance their psychological well-being. Once the workers' psychological needs are met, they may be more engaged within the organization, thus reciprocating the employers' trust and respect, forming a more profound commitment to the company.

Mitigate Risks

Numerous benefits are associated with teleworking; however, it is critical to craft plans to attenuate the risks related to the implementation of teleworking. Flexible work arrangements such as telework are not beneficial for all employees and situations. Vega et al. (2015) posit that while some teleworkers report higher levels of performance, satisfaction, and creativity, a telework policy could have a negative effect if perceived by the employees as a mandated requirement. They continue to affirm the aspect of choice and volunteering versus required action as important.

In the office, managers can track productivity by visually observing employees working. Tracking productivity is a concern for various software and programs designed to measure metrics such as keystrokes and completed tasks of production-related work. The critical issue is nonproduction tasks, which can be difficult to measure (Meadows, 2008). Instituting a system of measurement for nonproductive tasks such as creative works may require more time and resources, and still shed some doubt on the productivity and engagement of the employee (Sauermann, 2016). The face-to-face time also subconsciously factors into evaluations. Since management is not able to actively observe work, the perception of the employee may be impacted. A control for this is to avoid trait-based evaluations (Elsbach & Cable, 2012) which may be difficult in nonproductive fields. Video conferencing and continuous communication can help mitigate some of these issues. Trust in the systems and procedures implemented are key; however, also trusting employees and measuring data where applicable will help compare to the productivity achieved in the office.

Also, it is important to provide alternative work arrangements. A significant benefit of telework is the employee does not have to leave their home. However, when home life is counterproductive, such as living in sub-par conditions or experiencing domestic abuse, productivity and motivation may be reduced (Manko, 2021). An employee's home condition must be a consideration factor during the implementation of teleworking. Another benefit, the ability to juggle home-life duties with work-life, may result in role conflict. Work and home life

have different demands and, if not appropriately addressed, can “lead to undesirable attitudes as well as negative outcomes in both situations” (Caillier, 2016, p. 393). Some employees may also seek firm boundaries between the workplace and home (Manko, 2021). To address the home and work-life conflict, companies can keep limited office space with unassigned offices, maximizing resource utilization.

Businesses must plan for changing threats in the external environment. Industry trends and standards may dictate how organizations react and change. These include laws and regulations that should be factored into business strategies. One example is labor laws involving telework due to COVID-19 safety precautions. Many companies elected to transition to more remote work during the global pandemic. However, many more were forced to transition due to state, local, or federal guidelines. State and local mandatory lockdowns required businesses to allow remote work. Globally, some governments issued strict regulations limiting in-person contact and forcing remote work (Huggler, 2020; O’Dea, 2021). In 2020, Germany passed legislation providing a legal right to work from home similar to Switzerland in 2016 (Huggler, 2020). These government policies indicate a shift in global views about the future of office work.

Another consideration may be that businesses that were reluctant to allow telework as accommodation for disabilities may be forced to reconsider their stance. In the past, courts have ruled in favor of businesses that denied accommodations based on the definition of traditional full-time positions framed by in-office work. Businesses that refused telework accommodation for disabled employees were often supported by the courts if it was seen as an unreasonable accommodation that interfered with operations (Travis, 2021). However, many of these same businesses were able to pivot to fully remote work as the government shutdowns were mandated. Travis (2021) argues that the courts will revisit many of these challenges.

Communicate

Communication is the key to implementing teleworking effectively. Communication at all levels of the organization will create more buy-in and thus a smoother implementation of the strategy.

1. Communicate, communicate, communicate to employees. Employers should have an honest discussion with employees about the benefits individually and for the organization. Benefits for employees may be less commute time, parking expenses, money spent for lunch, daily coffees, dry cleaning, and office attire. Global Workplace Analytics (2020) estimates the average worker could save at least \$2500 a year on these related expenses.
2. Communicate, communicate, and communicate with external partners. Be intentional in communication about privacy, security of data, and communication with clients.
3. Convert to a paperless office. This is good for the environment and the bottom line. Being 100% paperless is not realistic, however, making progress toward being paperless allows firms to share information timely and efficiently. The added benefit is fewer costs

related to paper, shredding services, printer ink, and printer repair. However, electronic document storage and scanners may offset these savings.

4. Companies will need to invest in collaborative software for groups of people to easily communicate. Collaborative software provides video conferencing, document sharing, and storage.
5. Assist with employees' remote workplace by allowing employees to take home computers, monitors, office chairs, etc.
6. Clearly define expectations regarding meetings (virtual or in-person) and be clear about everyone's work schedules. Some companies may choose to have their employees physically come to an office by rotating office days with workdays.

CONCLUSION

This paper has highlighted the benefits of telecommuting for businesses and an outline of an implementation strategy. The implementation strategy framework consists of four main points: infrastructure, employee engagement, risk mitigation, and a communication plan. Using this implementation strategy may provide the organization with a competitive advantage. This competitive advantage can vary based on the organization. It could be higher productivity, cost-benefit savings, environmental health, and/or continuity of business operations. Furthermore, the ability to work virtually helps companies in cases of natural disasters, or in recent times the COVID-19 pandemic. Telework offers a work environment protecting the employee and organization in times of health crisis while also having a positive impact on the environment. Data suggests as technology advances and evolves, a shift to telework is the future. Nonetheless, businesses must be intentional about the use of telework by approaching it strategically.

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CONSUMERS' SETTING AND KEEPING RESOLUTIONS: THE ROLE OF SCHEMA INCONGRUITY RISEN FROM COVID INFECTION CASES

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ABSTRACT

Disruptive life events such as those risen from COVID infection could develop out of expectation, causing incongruence with consumers' past experience. How will the “unexpectedness” in life events influence consumers' motivation in goal setting and striving? Drawing upon the literature of schema incongruity and personal control, the current research examines the impact of incongruity in consumers' goal pursuit process. Three experiments were conducted. Results indicate that intriguingly, individuals react to schema incongruity by setting more personal goals (i.e., a motivating effect of schema incongruity in study 1). However, after they consider their personal control over their life situations in general, high-control individuals refrain more from setting goals in face of schema incongruity (i.e., a demotivating effect of schema incongruity in study 2). The demotivating effect carries over to goal striving process by switching savers to spenders (study 3).

INTRODUCTION

Every time as the new year approaches, millions of Americans set personal goals to achieve in the coming year. Among a myriad of personal resolutions for 2022, most popular goals include living healthier (23%), getting happy (21%), and losing weight (20%) according to Brower (2021). How many goals are set up in the first place and how strongly people commit themselves to the goals? A good portion of consumer research has identified strategies helping with setting and keeping resolutions. For example, to bolster self-control, consumers are encouraged to delay gratification (Metcalf & Mischel, 1999), set up implementation plan (Gollwitzer, 1999), pre-commit to chosen goals (Ainslie, 1975), as well as use self-empowered refusal framing (Patrick & Hagtvedt, 2012). These behavioral strategies may work from the inside of consumers by enhancing their power of will. This article presents a different look at the iteration between internal power of will and external feedback, particularly the seemingly unrelated feedback in a different context (e.g., COVID infection). Specifically, the current research examines how individuals would change their goal-directed behavior when they observe that external situations do not always unfold as they expected. Will this impact differ between individuals with higher and lower personal control over their lives?

Imagine, for instance, Jay finds from the local news that several COVID patients without medical preconditions are hospitalized due to severe infection. Since most people would expect a lower risk of severe infection among individuals without preconditions or comorbidities (Honardoost et al., 2021; Singh & Misra, 2020; Shiels et al., 2022; Centers for Disease Control

and Prevention [CDC], 2021), how would this incidental exposure to an unexpected cause-and-effect relationship influence Jay's motivation for pursuing his life goals such as saving for becoming a homeowner, losing weight for an upcoming wedding, studying for enrolling himself in a longed-for post-graduate program. What if Jay perceives himself to have a strong personal control over external situations in general? Will this mitigate the impact from the unexpected COVID infection?

Previous literature implies two plausible paths. On one hand, goal literature suggests that people set up goals if they expect to achieve them (e.g., Mukhopadhyay & Johar, 2005; Tolman, 1932; Bouffard-Bouchard, 1990; Locke & Latham, 2005; Latham & Locke, 1991). This implies that people are likely to reduce their goal-directed behavior when they realize that external situations may not develop according to their expectation. On the other hand, literature of schema incongruity suggests that when consumers experience incongruity with their past experience (e.g., unexpected severity of COVID infection in the example), incongruity itself could actually elicit more motivation from consumers and they could manifest deeper and more extensive processing (Goodstein, 1993), even increase their incidental learning (Poynor & Wood, 2010). At the same time, consumers are urged to resolve the incongruity (Meyers-Levy & Tybout, 1989) by seeking for effective action (Noordewier et al., 2021). This stream of research implies that following an unexpected encounter, individuals, instead of turning more passive on pursuing goals, could be more motivated towards setting goals in general.

To reconcile the implications from previous literature, the current research examines the effect of schema incongruity (i.e., an unexpected cause-and-effect relationship in COVID infection cases) on how likely people would set goals in the first place as well as refrain from goal-inconsistent behavior when implementing goals.

Prior research of schema incongruity largely focuses on the effect of positive surprises (e.g., incidentally gained time [windfall time] in Chung et al., 2022) or valence-neutral incongruity (e.g., ads atypicality in Goodstein, 1993). Differently, the current research examines the effect of "unexpectedness" about a negative event (i.e., COVID infection). A need for more research about the impact of the 'surprises' associated with negative events may be warranted. Public health emergencies and natural disasters could bring about unexpected disruptions to consumers including rapidly declining health, physical isolation, and last-minute evacuation (e.g., DeBerry-Spence & Trujillo-Torres, 2022). Examining psychological consequence and coping mechanism following negative events could be critical for restoring mental health among consumers and individuals in general. Therefore, the current approach goes beyond previous research on the topic by empirically demonstrating the consequence on consumers' goal pursuit following schema incongruity in negative events. Furthermore, the current research examines the effect between the individuals with different levels of personal control. Thus, the research enhances our understanding of the mechanism underlining the effect and potentially suggests intervention measures to guide goal striving among consumers more effectively.

Three experiments demonstrate that, intriguingly, individuals set more personal goals (i.e., a motivating effect) after they are exposed to a cause-and-effect relationship which is inconsistent with their prior knowledge about COVID infection (i.e., schema incongruity) comparing to they are informed of a consistent cause-and-effect relationship (i.e., schema congruity) (study 1). The motivating effect of incongruity reverses after individuals are reminded of their varying degrees of self-agency in external outcomes (i.e., personal control). Supporting the moderating effect of personal control, the demotivating effect of incongruity exists only for the individuals with higher perceived personal control (study 2). To further implications for

consumers, study 3 examines the effect of “unexpectedness” (incongruity) when consumers have a specific consumer-related goal. The results demonstrate that consumers with a saving goal are more likely to switch to goal-inconsistent (i.e., spending) behavior following schema incongruity. In contrast, the consumers who are exposed to schema congruity are more likely to adhere to goal-consistent behavior (i.e., saving).

Next, the extant literature of goal pursuit and schema incongruity is reviewed to offer a theoretical foundation for propositions, followed by empirical evidence. Finally, the theoretical and managerial implications for future research and practices involving managing consumer well-being in face of negative, unexpected events are discussed.

THEORY

Goal-directed Behavior and Schema Incongruity

Goal-directed behavior is often examined in two stages: goal setting and goal striving (Bagozzi & Dholakia, 1999; Thaler & Shefrin, 1981). Although goal setting and striving are independent processes but are often interrelated (Thaler & Shefrin, 1981). People tend to set goals if they expect to achieve them (Latham & Locke, 1991; Tolman, 1932). Prior literature identified both task and cognitive factors which enable individuals to see a clear path to goal attainment which in turn influences their goal-directed motivation. First, external feedback plays an important role in driving goal pursuit effort. People often need feedback that reveals progress in relation to their goals to better direct their effort (Locke & Latham, 2002). For example, task difficulty signals to individuals how likely they would attain goals, which in turn influences their level of effort exerted towards goals and eventually their goal attainment (Atkinson, 1958; Locke & Latham, 2002). Positive feedback often motivates goal pursuit because it increases goal commitment. Differently, negative feedback could be demotivating unless the feedback directly signals insufficient progress for their specific goal (Fishbach, Eyal, & Finkelstein, 2010). Combining these findings, people are sensitive to external feedback on their goals. They formulate their expectations on goal attainment and adjust their motivation accordingly. Following this thesis, in the case of receiving the information about a cause-and-effect relationship that they expect least, it should demotivate people from setting goals.

In contrast, literature about schema incongruity suggests the opposite. Schema theory in cognitive psychology suggests that people organize all available knowledge and experiences in memory-based structures, called schemata (Fiske & Taylor, 1991; Halkias & Kokkinaki, 2017). Schema *congruity* refers to the extent to which a piece of information conforms to expectations specified by its relevant schema (Areni & Cox, 1994; Heckler & Childers, 1992). Following this, schema *incongruity* occurs when consumers experience incongruity with their past experience (e.g., an unexpected cause-and-effect relationship). Incongruity is one aspect of external feedback perceived by individuals and it often causes individuals to feel surprised and aroused (Heckler & Childers, 1992; Meyers-levy & Tybout, 1989). Incongruity could elicit more motivation from people. For example, consumers are shown to increase their processing for schema-incongruent products relative to schema-congruent products (Meyers-levy & Tybout, 1989). Atypical ads (i.e., incongruity), comparing to typical ads (i.e., congruity), motivate more extensive evaluations by consumers (Goodstein, 1993). Restaurant menus in a format incongruent with customers' past experience promote more incidental learning by customers and lead to more satisfaction (Poynor & Wood, 2010). More relevant to goal pursuit, consumers are

urged to resolve the incongruity (Meyers-Levy & Tybout, 1989) by seeking for effective action (Noordewier et al., 2021). When inconsistency or unexpectedness is experienced, people are often motivated to make sense out of incongruity (Noseworthy, Murray, & Di Muro, 2018; Chung et al., 2022) by interpreting inconsistency (Yoon, 2013; Jurca & Madlberger, 2015) or engaging in attribution process to explain inconsistency (Alenazi, 2015). These previous findings suggest that schema incongruity may urge people to ‘correct’ incongruity by eliciting more actions towards improving the external situations. Following the thesis from schema incongruity, in the article, it is predicted that individuals will set a higher number of personal resolutions after they observe that an external situation does not unfold as they expect (i.e., schema incongruity). Since motivational effects often spill over across tasks (e.g., Gubler, Larkin, & Pierce, 2015), it is further suggested that the predicted effect could occur even when the unexpected encounter happens in a context irrelevant to the goals. For ease of demonstration, the predicted effect is termed *the motivating effect of incongruity* hence forth.

H1: Individuals set a higher number of personal goals following schema incongruity than schema congruity.

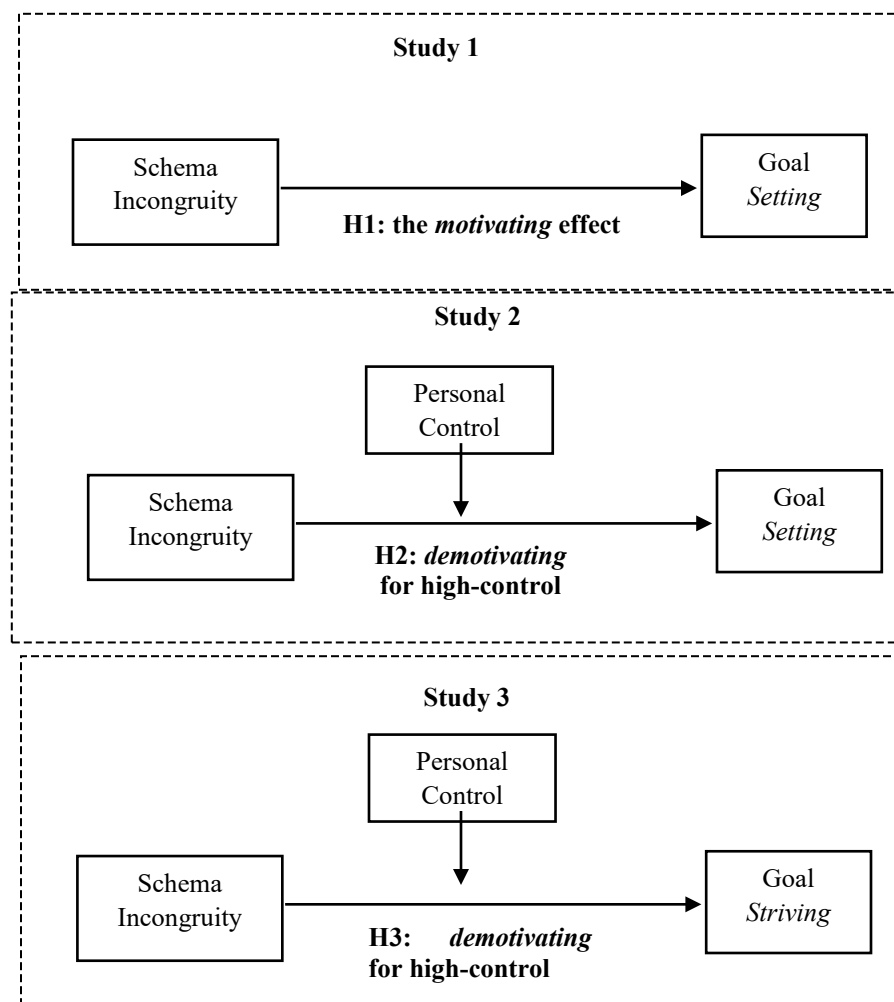
Goal-directed Behavior and Personal Control

In addition to schema incongruity, extant literature also reveals a few intrinsic factors which influence goal setting and striving. For example, goal-directed motivation is often associated with cognitive precursors. People are more motivated towards goal setting and striving when individuals have an implementation mind-set (Bayuk, Janiszewski, & Leboeuf, 2010; Gollwitzer, 1999; Gollwitzer & Sheeran, 2006) or they perceive that the means to goal are easy to process (Etkin & Ratner, 2013). Personal beliefs and lay theories largely influence goal pursuit too. For instance, people tend to set more goals if they have a stronger belief in their own competencies (Bandura, 1986; White & Locke, 2000), when they believe that their self-control is unlimited (vs. limited) (Mukhopadhyay & Johar, 2005). Similarly, in the current research context, people may edit their goal motivation depending on how likely they perceive their self-agency in external outcomes.

One of primary drivers of human behavior is the belief that one is in control of his/her outcomes in life (Kelley, 1971; Kelley, 1955; Heider, 1958). Personal control is defined as the perception that one can make things happen according to their will (i.e., self-agency) (Skinner, 1996). Personal control is often examined as a personal trait which varies among individuals (Pearlin & Schooler, 1978; Christie & Barling, 2009). However, the effect of personal control on behavior is more nuanced than “more personal control, stronger goal motivation”. Extant literature suggests that people actively seek for a sense of order and structure to maintain their individual-level baseline of perceived personal control (e.g., Kay et al., 2008; Cutright et al., 2011; Jia & Wyer Jr., 2022). In consequence, people seek to restore a sense of order when they feel their sense of control is threatened by seeking for structure from outside systems such as authorities (e.g., Kay et al., 2008; Cutright et al., 2011), inferring product quality from its price or a medicine’s effectiveness from its bad taste (Jia & Wyer Jr., 2022). In the current context, high-control people may feel more threatened on their sense of control than low-control people following an unexpected, incongruent event schema. As a result, they may feel more urged to restore a sense of order and structure by conforming to the external feedback while setting goals. Therefore, it is posited that high-control people, once reminded of their high personal control in general, will be more likely to set more (vs. less) goals following schema congruity (vs.

incongruity) to strive for a sense of order and structure. In contrast, there should be no difference in the effect among low-control people because they are possibly neither sensitive to external feedback nor feel as much urged as high-control people feel to cope with a deteriorating sense of order in face of schema incongruity. In other words, the motivating effect of schema incongruity in H1 will reverse for high-control people. According to the delineated thesis above, it is possibly because that schema incongruity evokes high-control people's stronger need for a sense of order and structure than low-control people and causes them to confirm to schema incongruity while adjusting their goal motivation. The effect is termed the *demotivating effect of schema incongruity* for high-control individuals.

Figure 1
Conceptual Model



H2: Individuals who are reminded of their personal control over external outcomes will set up a higher number of personal goals after they experience schema congruity (vs. incongruity). The effect is truer for those with a higher (vs. lower) sense of personal control.

For similar reasons above, a demotivating effect of schema incongruity is predicted to carry over from goal setting to goal striving. In other words, schema incongruity will trigger goal-inconsistent behavior whereas schema congruity will reinforce goal-consistent behavior. Following H2, the effect on goal striving is predicted to show only among individuals with a boosted sense of personal control.

H3: Consumers will be more likely to switch to goal-inconsistent (vs. consistent) behavior following schema incongruity (vs. congruity). The effect is truer for those with a boosted sense of personal control.

For a summary of hypotheses, see figure 1. Empirical evidence will be presented in the following section.

EXPERIMENTS

Study 1

The purpose of study 1 was to test the hypothesis that prior exposure to schema incongruity causes individuals to set more life goals. To incur schema incongruity about a negative event, the design was set in the context of COVID infection. A good portion of literature across nations have identified that level of severity of COVID infection is positively associated with COVID patients' age, presence of comorbidities (e.g., Honardoost et al., 2021; Singh & Misra, 2020; Shiels et al., 2022). Similarly, CDC's vaccine guidelines for various age groups suggest that risk of severe infection correlates positively with one's age (CDC, 2021). Thus, by presenting COVID infection information which is inconsistent with people's expectation on its cause-and-effect relationship, it is expected to introduce schema incongruity about a negative event.

Participants and Experiment Design

A total of 150 college students (101 females, average age 22.52) of junior and senior standing from a mid-sized private university in the United States were recruited during May 2022. The design was a single factor between-subject design at two levels (schema congruity vs. incongruity). The participants were randomly assigned to either one of levels.

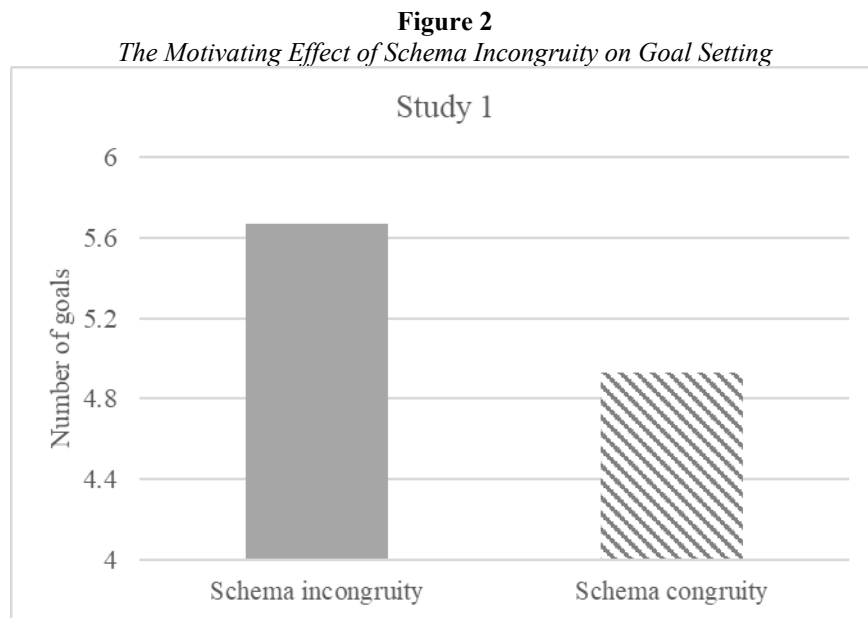
Procedure

Participants were first asked to review the profiles of four COVID patients. Then the participants were presented three pieces of information about each patient: age, presence of comorbidities (yes or no) and severity of infection (mild, moderate, or severe). The schema congruity/incongruity factor was manipulated by reordering the three pieces of information such that age and presence of comorbidities are either positively (i.e., schema congruity) or negatively (i.e., schema incongruity) correlated with severity of COVID infection (see Appendix I). In specifics, the participants that were randomly assigned to schema *incongruity* condition ($n=75$) were presented with information showing that younger patients without comorbidities are severely infected whereas older patients with comorbidities were either moderately infected or their infection were mild. In contrast, participants assigned to the schema *congruity* condition ($n=75$) were presented with the information suggesting a positive correlation between age and severity of infection about the same COVID patients and that presence of comorbidities among

them is positively associated only with the severe infection cases. Explanation about comorbidities and exemplar preconditions are provided to all participants at the beginning of the experiment. As a manipulation check on schema incongruity, participants were asked: to what extent severity of infection of these patients fit their expectation given the patients' age and presence of comorbidities. Responses were collected on a seven-point scale with one being "least expected" and seven being "most expected". Then, following the procedure modified from Mukhopadhyay and Johar (2005), all participants were asked to list their current personal, academic, or financial/consumption-related goals as many as they can think of for the upcoming year and separate them by typing them in different textboxes provided. Lastly, participants reported their demographic information.

Results and Discussion

The number of self-generated personal goals was analyzed as a function of schema incongruity. An analysis of variance (ANOVA) revealed a main effect of schema incongruity on number of personal goals set by participants ($F(1, 148) = 4.50, p = .03$; see Figure 2). Specifically, participants exposed to schema incongruity generated a higher number of personal goals ($M_{\text{schema incongruity}} = 5.67, SD = 2.98$; $M_{\text{schema congruity}} = 4.93, SD = 2.98$). Manipulation check confirmed that the participants exposed to schema incongruity found the provided cause-and-effect relationship more unexpected than those exposed to schema congruity ($M_{\text{schema incongruity}} = 3.53, SD = 1.82$; $M_{\text{schema congruity}} = 5.78, SD = 1.82$).



The results showed that exposure to an unexpected cause-and-effect relationship (i.e., schema incongruity) risen from COVID infection cases influences individuals' motivation to set personal goals in general. The direction of the effect is contrary to popular belief and supports H1 showing a *motivating* effect of schema incongruity. As discussed earlier, this phenomenon is consistent with implications from prior schema incongruity literature and will be likely

moderated by individual's different degrees of sense of personal control. Study 2 was designed to provide evidence for this account.

Study 2

The focus of study 2 was to demonstrate that the motivating effect of schema incongruity in goal setting will reverse after individuals consider their own level of personal control over situational outcomes and that only high-control people are sensitive to schema incongruity. It is predicted for a *demotivating* effect of schema incongruity for high-control people.

Participants

A total of two hundred and twelve (111 females, average age 41.22) Amazon Mechanical Turk (MTurk) workers from the United States were recruited in July 2022 from the online survey panel CloudResearch (<https://www.cloudresearch.com/>).

Design and Procedure

The experiment started with a measure of perceived personal control over external situations by rating six statements which were adapted from Lachman and Weaver (1998). Responses were collected on a seven-point scale with one being “strongly disagree” and seven being “strongly agree” (see Appendix II). Six statements in the personal control measure were presented to participants one at a time in a randomized order. After this, participants were randomly assigned to either one of conditions (schema congruity vs. incongruity) following the same procedure as in study 1. Similarly, participants generate their personal goals for the coming year. Different from study 1, participants were also measured on their fear for death towards the end of the experiment in order to rule out the possibility that the effect in study 1 was confounded by the fear for death which could be possibly incurred by the unexpected COVID infection cases. The measure of the fear for death includes six statements which were adapted from (Boyar, 1964) (See Appendix II). In the end, participants reported their demographic information.

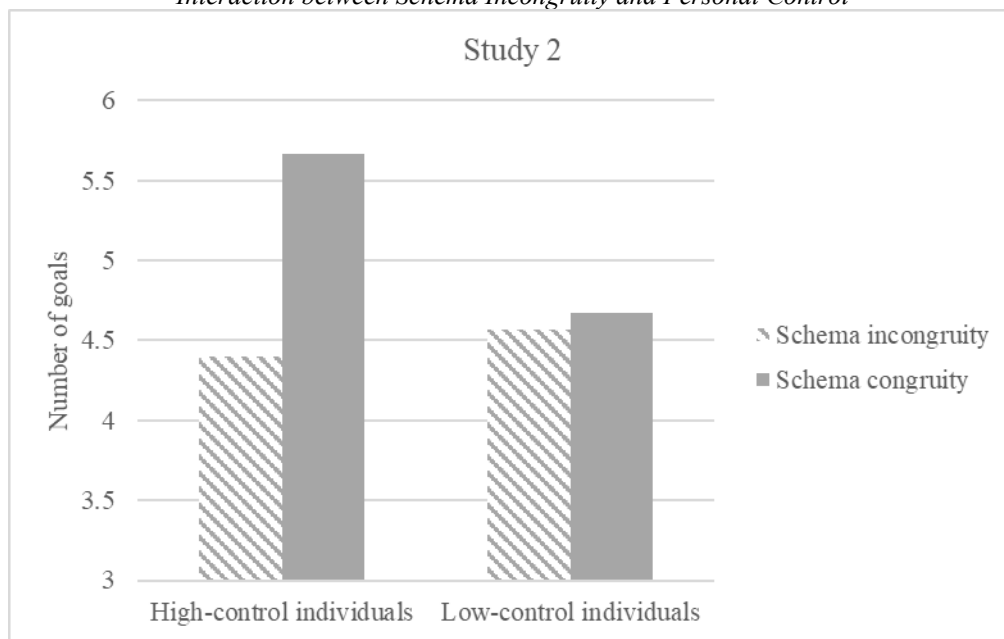
Results and Discussions

The manipulation check again confirmed the successful manipulation of schema incongruity ($M_{\text{schema incongruity}} = 3.54$, $SD = 1.58$; $M_{\text{schema congruity}} = 5.83$, $SD = 1.58$). Consistent with H2, an ANOVA analysis revealed a main effect of schema incongruity on number of personal goals set by participants ($F(1) = 4.64$, $p = .03$), suggesting a *demotivating* effect of schema incongruity after participants were reminded of their own level of personal control over life situations in general. Specifically, in contrast to the effect shown in study 1, after reporting their own perceived personal control over their life situations in general, participants exposed to schema incongruity generated less personal goals than those exposed to schema congruity ($M_{\text{schema incongruity}} = 4.49$, $SD = 3.28$; $M_{\text{schema congruity}} = 5.17$, $SD = 3.23$, $F(1) = 4.64$, $p = .03$). To examine the moderating effect of personal control, the data collected from the six-item personal control measure were averaged to form a personal control composite score for each participant. Following the procedure of median split widely used in consumer and psychology research (e.g., Lacobucci et al., 2015; Moorman et al., 2004), participants were grouped into either high- or low-control group depending on whether their self-reported composite score was above or below the median score 4.83 for all. Then, an ANOVA analysis was carried out on a 2 (schema

incongruity vs. congruity) \times 2 (high vs. low personal control) between-subject design. Consistent with H2, the analysis revealed a marginally significant interaction effect between schema incongruity and personal control factors ($F(1, 208) = 5.26, p = .06$; see Figure 3). The demotivating effect only presents for the high-control participants. In other words, only for the participants with a higher sense of personal control, schema incongruity will demotivate them from setting personal goals ($M_{\text{schema incongruity}} = 4.40, SD = 3.38$; $M_{\text{schema congruity}} = 5.67, SD = 3.11, p = .01$) whereas for those with a relatively lower sense of personal control, there is no difference in their goal setting behavior as a function of schema incongruity ($M_{\text{schema incongruity}} = 4.57, SD = 3.16$; $M_{\text{schema congruity}} = 4.67, SD = 3.33$; *NS*).

To rule out the alternative account of the effect by the fear for death which could be possibly evoked by unexpected severe COVID infection cases, an ANOVA analysis regressed the fear-for-death composite rating on schema incongruity and personal control factors. The analysis showed a null effect of schema incongruity on participant's fear for death ($M_{\text{schema incongruity}} = 3.99, SD = 1.62$; $M_{\text{schema congruity}} = 4.03, SD = 1.60$; *NS*) and a null effect of interaction between schema incongruity and personal control ($F(1, 208) = .60, NS$).

Figure 3
Interaction between Schema Incongruity and Personal Control



The results of study 2 supported H2 demonstrating that, different from the results in study 1, schema incongruity demotivates individuals from setting personal goals when they are reminded of their perceived personal control over their life situations in general. This implies that schema incongruity may pose an incidental threat to people's general sense of order and structure. As the incidental threat is more prominent for high-control people, as a result, schema incongruity may cause high-control people to restore a sense of order by conforming to external feedback (i.e., schema incongruity in COVID cases). In other words, high-control people may be more urged to cope with a threat to their sense of order risen from schema incongruity by setting less life goals in general. The results also suggest that schema incongruity in the context of

COVID infection will unlikely cause fear for death among individuals to the point that it systematically contributes to the effect in studies 1 and 2.

As discussed earlier, goal-directed behavior is often studied in two stages -goal setting and goal striving. Studies 1 and 2 focused on exploring the effect of schema incongruity on the first aspect of goal-directed behavior – goal setting. Study 3 was designed to examine the consequence of schema incongruity in the other aspect of goal pursuit which is goal striving.

Study 3

Study 3 was intended to offer more implications in consumer-related issues when consumers have a specific goal to achieve. It also aims to provide further evidence on the *demotivating* effect of schema incongruity on goal striving which is often found a challenge for consumers (Mukhopadhyay & Johar, 2005; Tolman, 1932; Bouffard-Bouchard, 1990; Locke & Latham, 2002). Therefore, different from studies 1 and 2, study 3 will examine consumers' intention to switch to goal-inconsistent behavior while bearing a specific goal. Since saving is one of the most common resolutions that people in the U.S. have in 2021 (Pattman, 2021), the design was set in the context where consumers have a saving goal for the upcoming year.

Participants

The experiment recruited a total of two hundred (112 females, average age 42.21) Amazon Mechanical Turk (MTurk) workers during August 2022. In order to recruit the individuals who have a saving goal in mind for the upcoming year, the recruiting advertisement specifically asked for only savers to sign up for the experiment. Later in the experiment, participants were asked to report their saving motivation on a three-item measure to further ensure that a saving goal is equally salient among all participants.

Design and Procedure

The experiment was a 2 (schema incongruity vs. congruity) x 2 (high vs. low personal control) between-subject design. Differently, a sense of personal control was temporarily primed with participants in study 3 depending on which level of personal control condition they were randomly assigned to. The experiment used the same priming procedure for personal control in extant literature (e.g., Cutright & Samper, 2014; Jia & Wyer Jr., 2022) by asking participants to describe an incident for which they had (vs. did not have) control over the situation. After this, participants rated on a three-item manipulation check about their sense of personal control. The following manipulation on schema incongruity is the same as in studies 1 and 2. To measure motivation for goal striving behavior, following the similar procedure in Fishbach and Dhar (2005), all participants were asked to imagine they were halfway from reaching their saving goal and then indicate how likely they would engage themselves in the following behavior. Two specific behaviors were presented to all participants then. One is the saving behavior consistent with the saving goal: saving more money than planned for the next few days. The other is the spending behavior which is inconsistent with the saving goal: buying something unneeded only for a different color or a better design. Responses on intention for each behavior were collected on a seven-point scale with one being “very unlikely” and seven being “very likely”. Towards the end of the experiment, participants reported their saving motivation via a seven-point scale on three statements (See Appendix II).

Results and Discussions

The manipulation check again confirmed the successful manipulation of schema incongruity ($M_{\text{schema incongruity}} = 3.16$, $SD = 1.60$; $M_{\text{schema congruity}} = 6.04$, $SD = 1.60$, $p < .001$). The manipulation check on control priming also verified a successful manipulation on perceived personal control ($M_{\text{high control}} = 6.36$, $SD = 1.11$; $M_{\text{low control}} = 1.64$, $SD = 1.11$, $p < .001$).

Partially supporting H3, an ANOVA analysis revealed a *demotivating* effect of schema incongruity on intention for a specific goal-inconsistent behavior (i.e., spending behavior). Participants exposed to schema incongruity is more likely to switch to goal-inconsistent behavior comparing to those exposed to schema congruity ($M_{\text{schema incongruity}} = 2.76$, $SD = 1.64$; $M_{\text{schema congruity}} = 2.16$, $SD = 1.64$; $F(1) = 6.47$, $p = .01$). However, the temporarily boosted sense of personal control did not moderate the demotivating effect of schema incongruity as predicted in H3 ($F(1, 196) = .97$, NS). The results also show that participants exposed to schema congruity is marginally more likely to engage themselves in goal-consistent behavior ($M_{\text{schema incongruity}} = 5.32$, $SD = 1.51$; $M_{\text{schema congruity}} = 5.63$, $SD = 1.52$, $p = .16$). Again, varying levels of personal control primed with participants did not interact with schema incongruity to make a difference in the participants' intention for goal-consistent behavior ($F(1, 196) = .34$, NS). Lastly, an ANOVA analysis shows no difference in the saving goal salience among participants as a function of schema incongruity ($F(1) = .33$, NS), personal control level ($F(1) = .39$, NS), or interaction of these two factors ($F(1, 196) = .68$, NS). In other words, a saving goal is shown to be equally salient among participants in study 3 ($M = 6.43$).

The results in study 3 suggest that schema incongruity plays a larger role in goal striving behavior than personal control since a main effect only of schema incongruity is observed. Consistent with the effect on goal setting in study 2, the result in study 3 demonstrated that a *demotivating* effect of schema incongruity carries over to goal striving after consumers are temporarily primed with varying degrees of personal control. Going beyond studies 1 and 2 in a more general setting for all, study 3 extends the implications for consumer research by demonstrating a replicate of the effect on goal striving when consumers have a specific goal to achieve.

GENERAL DISCUSSION

Theoretical Contributions and Limitations

Consumer behavior is largely goal-driven (Campbell & Warren, 2015). Goal-directed behavior plays an important role in consumers' well-being in modern society as achievement of many personal goals determines our health and financial status etc. Whereas a significant portion of consumer research examined a myriad of factors influencing goal setting and striving (e.g., Fishbach & Dhar, 2005; Locke & Latham, 2002; Campbell & Warren, 2015), relatively few studies have empirically explored the impact of exposure to schema incongruity in goal-driven effort. The shortage of such studies is even more surprising given that schema incongruity is a well-studied aspect of the interaction process between consumers and brands (e.g., Yoon, 2013; Dimofte, Forehand, & Deshpande, 2003; Hailkias et al., 2017). Incongruity is part of everyone's life too. Partly due to the proliferation of social media, consumers are far more likely nowadays to expose themselves to events which unfold in an unexpected way (Dupuis, Chhor, & Ly, 2021). Therefore, it is much needed to empirically examine the downstream effect of exposure to schema incongruity in consumers' goal pursuing effort.

The results of the current research suggest that consumers tend to feel more motivated towards setting goals after they observe the events which are inconsistent with their expectation on the cause-effect relationship involved in that context (study 1; H1 is supported). However, if they are reminded of their personal control over life situations in general, high-control people get backfired by their high sense of self-agency by conforming to the incongruent message from event schemas, leading to a diminished motivation towards setting goals (study 2; H2 is supported). The pattern of the effect on goal setting continues to goal striving. In general, consumers exposed to schema incongruity would be demotivated from goal-consistent behavior and are more likely to switch to goal-inconsistent behavior i.e., savers tend to switch to spending behavior after they experience schema incongruity (study 3; H3 is partially supported). However, the moderating role of personal control in goal setting (study 2) was not replicated in goal striving (study 3). It could be because that personal control was measured as a personal trait in study 2 whereas it was temporarily primed with participants in study 3. Given that individuals have varying but consistent levels of personal control, personal control may exert stronger influence on one's attitudes and behavior when it operates as a long-lasting personal trait than when it is primed with participants as a temporary self-view.

The current research contributes to extant literature in several ways. First, the research advances literatures of both goal pursuit and schema incongruity by showing the effect of the latter on consumers' general goal setting and striving. This may be the first study ever examining the connection between these two factors. Second, the results from study 1 documents an intriguing motivating effect of schema incongruity on goal setting. The finding helps reconcile the implications from two streams of research – schema incongruity and goal motivation. It may also deviate from the popular belief that people are often discouraged from setting goals after they expose themselves to surprising, unexpected cause-effect relationship. Third, the research contributes to consumer research about personal control by examining its role in the demotivating effect of schema incongruity beyond a variety of behavioral consequences of personal control documented in extant consumer literature (e.g., Cutright & Samper, 2014; Mukhopadhyay & Johar, 2005). Lastly, the research may open a path for future research to further examine the role of personal control and generates a possible intervention measure to restore individuals' motivation towards life goals following surprising life events.

The current research is limited in its empirical exploration. First, the research only examines the role of schema incongruity in a context of COVID infection cases. The effect may not hold in other contexts where schema incongruity is presented to consumers. In the future research, the effect could be further testified in more consumer-related contexts such as advertisement, retailing environment in extant literature (e.g., Poynor & Wood, 2010, Goodstein, 1993). At the same time, the documented effect of schema incongruity in the context of COVID infection cases may vary as a function of consumers' perception about severity of the pandemic. For example, the federal and/or local government's COVID policy may influence consumers' perception about severity of the pandemic. In return, the surprising COVID infection cases may be perceived as more inconsistent for those consumers who feel more threatened by the pandemic than those who feel less disturbed by the situation. As a result, the effect of schema incongruity may encourage them to set up more personal goals, consistent with H1. Important to point out, the current research did not empirically examine such a difference in the effect as a function of consumers' varying reactions to the COVID pandemic. Second, the result reveals both motivating and demotivating effects of schema incongruity and suggests possible reasons for the difference in the effect after individuals consider their personal control over life situations

in general. However, the current research did not empirically examine the suggested processes. For example, the differential motivating (study 1 with participants at an average age of 22) and demotivating (studies 2&3 with an average age of 41-42) effect could be partially attributed to age of consumers. Extant research demonstrates that younger people tend to act more harshly towards terror of death than older people (Maxfield et al., 2007). Although the results in study 2 ruled out the confounding effect of fear of death on goal motivation, it is plausible that younger individuals may be more responsive than older ones to schema incongruence in the surprising COVID infection cases. Again, the current research did not make a prediction and offer empirical evidence in this aspect due to a lack of sufficient theoretical ground. Given personal control is a widely studied concept in consumer research and a basic need among individuals for daily living, it could be another highly relevant and fruitful research path for the future. For example, the extant literature shows that affiliating oneself with a religious body could help enhance one's personal control over external situations in general (Kay et al., 2008). In line with this thesis, the effect in the current research could be moderated by one's religious belief too. The future research may explore in this direction. Furthermore, a temporarily boosted sense of personal control did not cause the effect in study 3 to the same extent as personal control as a personal trait in study 2. Future research may focus on examining the mechanism underlying such a differential impact of personal control and as a result, may help identify more active ways of intervening than measuring personal control to facilitate consumers in goal striving. In addition, the current research did not examine the factors which could influence consumers' sentiment towards a saving goal (study 3). For example, consumers who are unemployed could be more careless about a saving goal than those who are currently employed. Similarly, the group who receives government subsidies may respond to a saving goal differently than the group who does not. The current research examined the net effect of all these possible factors by measuring salience of a saving goal among all participants instead of examining the effect of each factor respectively. Lastly, the current research did not examine locus of control (Lefcourt, 1991) because the research focused on the incongruent cause-effect relationship risen from a context which is distantly related to the goals, deviating from the setting that the research of locus of control usually examines. However, it could be potentially fruitful for future research to examine the iteration of locus of control and schema incongruity on goal-directed behavior.

Managerial Implications

In addition to the above-mentioned theoretical implications, the current research generates managerial implications for both firms and policy makers.

From the perspective of providing external feedback to drive goal pursuit effort (Locke & Latham, 2002), firms may modify their communication campaigns up to schema (in)congruity depending on which route fits better to guide consumers' efforts. For example, firms may facilitate consumers in setting new goals or switching and re-prioritizing goals by utilizing atypical advertisements (Goodstein, 1993) and displaying products in an incongruent format in retailing context (Poynor & Wood, 2010). Specifically, based on the results of study 1, consumers tend to generate more personal goals to cope with inconsistency perceived in the consumption context. Accordingly, if firms guide consumers appropriately by exposing them to atypical advertisements or product display formats, it may trigger consumers to generate more New Year resolutions and as a result, feel more motivated and purposeful about their holiday

purchases. Similarly, study 3 documented that consumers are more likely to switch to a different goal (goal-inconsistent behavior) after they experience schema incongruity. Following this, when firms' offerings have the potential to encourage consumers to switch from a pleasure to health goal, mild incongruity in product communication format may help nudge consumers to switch gear in goal setting in general. Alternatively, since high-control individuals are more sensitive to schema incongruity and tend to demotivate themselves from setting goals after experiencing incongruity (study 2), firms may need to organize brand/product information consistent with consumers' expectations to maintain their goal motivation especially among the consumer groups who usually assume themselves to have a large control over life situations in general. In contrast, low-control customer groups may not react as sensitively as high-control groups to schema incongruity in terms of goal setting. As implied in the results where low-control individuals are not as easily discouraged as high-control ones by schema incongruity (study 2) but could be motivated towards goal setting in general by schema incongruity (study 1), marketing communication could be more effective if marketers remind the low-control customer groups about how often external situations developed out of expectation in the past.

Disruptive events (e.g., public health emergency, mandatory evacuation following natural disasters) often develop unexpectedly (DeBerry-Spence & Trujillo-Torres, 2022). To restore mental health and encourage goal striving after adversity, policy makers may need to respond quickly to take advantage of individual's instant, natural reactance to schema incongruity in terms of more goal setting and striving. Specifically, individuals tend to increase their goal motivation immediately after they experience/observe disruptive, incongruent events (i.e., the *motivating* effect of schema incongruity in study 1). Policy makers should take advantage of this temporary boost of goal motivation and strive to quickly offer detailed guidance on the most important actions/goals which may help the public quickly recover from adversity.

From a broader perspective, in addition to paying attention to consumer's sensitivity to and sentiment about the "incongruity" element in public events, policy makers and marketers need to take consumer's own sense of personal control into consideration when firms are taking actions. For example, for those high-control consumers, policy makers or marketers need to do more work to encourage goal striving when public events unfold unexpectedly because the results suggest that high-control people are more responsive to incongruity and their higher need for order and structure may backfire in terms of demotivating them from setting goals.

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APPENDIX I

Manipulation of schema congruity vs. incongruity (Studies 1-3)

Schema Incongruity

Age	Presence of Comorbidities	Severity of COVID Infection
68	Yes	Moderate
29	No	Severe
38	No	Severe
73	Yes	Mild

Schema Congruity

Age	Presence of Comorbidities	Severity of COVID Infection
68	Yes	Severe
29	No	Mild
38	No	Moderate
73	Yes	Severe

Note: The information is presented to participants for one patient at a time. Four patients are presented in a randomized order.

APPENDIX II

Measures of personal control (Study 2)

1. I have much control over the way my life turns out.
2. I can do just about anything I really set my mind to.
3. What happens to me in the future mostly depends on me.
4. I often feel helpless in dealing with the problems of life.
5. There are many things that interfere with what I want to do.
6. I sometimes feel I am being pushed around in my life.

Measures of fear for death (Study 2)

1. I have moments when I get really upset about dying.
2. The idea of never thinking again after I die frightens me.
3. The pain involved in dying frightens me.
4. What will happen to my body after death does not concern me.
5. I am not at all disturbed by the finality of death.
6. Some people are afraid to die, but I am not.

Measures of salience of a saving goal (Study 3)

1. I plan to save for the year.
2. Saving is important for me to realize my personal goal (s).
3. My life will improve a lot if I reach my saving goal \$\$.

Note:

1. Participants were asked to rate on one statement at a time. Responses were collected on a seven-point scale with one being “strongly disagree” and seven being “strongly agree”.
2. The statements were presented in a randomized order.
3. The last three items for the measures of personal control and fear for death were reverse coded.

CUSTOMER PERCEPTIONS OF SERVICE ROBOTS IN PROVIDING SERVICES: THE ROLE OF EMOTIONAL INTELLIGENCE FOR CUSTOMER SATISFACTION

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ABSTRACT

The worldwide exponential growth of technology and artificial intelligence (AI) associated with robotization, the globalization of markets, and the detriment of the workforce, have made the service industry an attractive sector for emerging technological innovation (Tuomi et al., 2021). Service robots are beginning to perform service deliveries that used to be completed by human employees. The service industry has been recognized for achieving customer satisfaction in any service delivery through the emotional intelligence skills that are naturally given to human employees, so it is expected that the mission of service robots is to maintain this satisfaction in customers (Sayed & Proches, 2021; Torres et al., 2019). Previous research has shown that replacing traditional employees with service robots has generated customer dissatisfaction and decreased quality-of-service provision. Although high technology and artificial intelligence have taken over service robots, the lack of emotional intelligence skills in service robots has hindered their popularity from customers' perception. (Paluch & Wirtz, 2020; Park & del Pobil, 2013).

The purpose of this current study is to explore the importance of the customer-machine relationship in the provision of services and the role that emotional intelligence plays in the perception of customers. It reviews the literature on the importance of emotions in the service industry and offers three propositions. The literature review indicates that, despite the natural abilities given to clients, they prefer to delegate the execution of repetitive tasks to robots. The development of social/emotional skills in service robots is essential to fit into the service industry and maintain the social status of service robots by providing customer satisfaction. Once these social/emotional skills, technological advances, and artificial intelligence enhancements are fully developed in robots, the impact on customer and employee perception will likely be more substantial.

INTRODUCTION

The beginning of the industrial revolution, at the end of the 18th century, revealed the capacity of technology to change and evolve rapidly. Humanity experienced several technological miracles during this time that brought various lifestyle changes. Steam engines appeared in factories, awakening the manufacturing sector, particularly in the agricultural and

textile industries. Production lines were implemented that managed to streamline production and replace part of the workers, also lowering costs (Sorooshian & Panigrahi, 2020). Human capital, for its position, seemed to be threatened, although the benefits of systematization were impressive in the economy of the time. In 1869, the rate of production per hour in the United States increased by 1.6% over previous years (Wirtz et al., 2021).

Technology has driven rapid change and constant evolution. Communication went from letters to emails, from horse-drawn carts to electric cars. Commerce went from physical in the markets to virtual on platforms like Amazon or eBay. Business interactions have evolved to the point of closing a deal with a single click. Software development has improved, as well as features such as voice recognition and commands for various applications for both corporate and consumers (de Kare-Silver, 2020). Examples include AI-powered voice assistant devices such as Google's Google Assistant, Apple's Siri, Amazon's Alexa, Samsung's Bixby, and Microsoft's Cortana (Klein et al., 2020).

Artificial intelligence can be used to automate business processes where algorithms independently complete their scheduled tasks without human intervention. For example, it is possible to predict customer behavior and make personalized recommendations based on past behavior patterns (Paluch & Wirtz, 2020). The World Economic Forum predicts that robotization and process automation will cause the loss of low-skilled jobs. It is estimated that almost 50% of companies will reduce their human capital in the coming years due to automation. And 47% of current jobs will be obsolete in two decades because mechanized work will be prioritized over humanized work (León Llorente, 2020).

While the use of industrial robots has a long tradition in manufacturing industries, there is a more recent phenomenon known as service robots (Ott et al., 2021). Service robots are anticipated to affect various sectors, especially those industries that rely heavily on repetitive manual labor, which tends to be of low cognitive and emotional complexity. These will be the first to feel the impacts of impending automation. For example, in the transportation industry, it would be possible to install a hologram-based service robot inside an airport to help passengers and answer common questions in all languages (e.g., providing arrival and departure information and directions to get to check-in counters for a particular airline), tasks that would typically require multiple employees (Wirtz et al., 2021).

The social and labor scenario is currently facing critical challenges: the aging of the population and the abandonment of the labor market. According to the European Center for the Development of Vocational Training, 80 million jobs will be created in the coming years (León Llorente, 2020). The exponential growth of technology associated with robotization, the globalization of markets, and dependence on human work make the service industry attractive for emerging technological innovation. For example, several hotels have replaced service personnel in Japan with interactive robots. While in the UK, there is a growing interest in investment in the food technology sector, particularly restaurant robotics (Tuomi et al., 2021).

The combination of artificial intelligence and service robots will likely transform service sectors and lead to rapid innovation, potentially improving customer experiences with better service quality, reducing costs, and increasing productivity simultaneously (Belanche et al., 2020). Abuselidze and Mamaladze (2021) expected artificial intelligence to become a \$118.6

billion industry by 2025. And Wirtz et al. (2021) predict that the market size of service robots will reach \$41.5 billion by 2027. The latest advances in AI and automation allow robots to sense and respond to their environments, thus expanding their versatility in moving through industries such as hospitality, transportation, restaurants, customer service, and delivery. Service robots can analyze large volumes of data, integrate information, recognize patterns, relate them in minutes, propose the most appropriate solutions, and make precise recommendations (Paluch & Wirtz, 2020; Wirtz et al., 2021).

Despite the rise of service robots, some people still have difficulty including robots to perform tasks (Park & del Pobil, 2013). The Henn-na Hotel in Japan opened its doors in 2015 and is operated entirely by service robots. Dissatisfaction among the users began to grow due to issues such as lack of knowledge and the annoying noises that the robots generated, forcing the hotel management to involve human personnel in its first line to deal with the robots and guests (Paluch & Wirtz, 2020). Dealing with emotions is considered an unskilled task that is difficult for robots as it goes beyond a superficial behavioral display. Particularly complex and emotionally demanding tasks are still best handled by human service employees, as they can generate genuine emotions such as enthusiasm and joy or empathy and compassion in the service encounter, something that technology is still developing (Wirtz et al., 2021).

In a service environment, there is a strong link between the emotions of employees and customers. Understanding and managing customer emotions is imperative to providing good customer service, as emotions influence customers' decisions (Sayed & Proches, 2021). Emotional Intelligence (EI) represents an essential element in connecting feelings and emotions. Emotion is a state of mind of short and intense duration that works as an automatic defense system and is sensitive to an internal or external stimulus and sometimes could affect the individual's reaction ability. EI involves some essential skills in any human relationship, such as perceiving emotions, expressing, knowing, understanding, and regulating them, promoting emotional and intellectual development (Anderlová & Pšurný, 2020; Dambean, 2021).

This research aims to explore the factors that prevent robots from replacing humans in the service industry, as well as the factors that induce the tendency to reject service encounters led solely by service robots. Emphasizing the importance of emotional intelligence and human-robot interaction in the service industry from a superficial vs. genuine behavioral display will be assessed.

LITERATURE REVIEW

Emotions and Emotional Intelligence (EI)

The recognition of emotions and regulating them are essential in the service industry. Employees are constantly dealing with customers' positive and negative emotions, so it is necessary to control them to deliver a positive service experience. For example, customer service agents have a challenging job because their environment is often loaded with customers' negative emotions and dissatisfaction with the service. Emotions tend to be contagious, so the employee's mission is to regulate the customer's emotions, seeking to transform them into positive ones (Ribeiro & Prayag, 2019; Widdershoven et al., 2021). This ability to regulate emotions is known

as emotional Intelligence (EI). EI can be defined as the ability to perceive, analyze, express, and control emotions, generating empathy and promoting emotional and intellectual growth (Mayer & Salovey, 1997, p.10), mentioned by (Gutiérrez-Cobo et al., 2018). It is necessary for service industry employees to have well-developed emotional intelligence skills to manage multiple customer backgrounds with different needs and provide quality service, typical of the service sector (Sayed & Proches, 2021).

Emotions are integral components of the human brain's nervous system that are reflected in the form of variations such as in the tone of voice, body gestures, written or facial expressions, and in their daily behavior as a result of eliciting events from external or internal factors (Thompson, 2013; Sayed & Proches, 2021). The psychological literature has several theories about emotions. Izard (1977; p. 43) presents his theory where he affirms the existence of ten fundamental emotions, seven negatives, two positives, and one neutral. Their combinations create a great variety of emotions, constituting the human motivational systems necessary for survival. Other authors, such as Plutchik (1980; p. 8-9), postulate the theory of the existence of 8 primary emotions, which Izard would call fundamental, and are distributed as four negatives, two positives, and two neutral. Both authors agree that all other emotions are mixtures of primary or fundamental emotions and that these have the capacity to adapt (Gilbert et al., 2021).

The adaptability of emotions could be transferred to the market, particularly to customers. When a customer experiences a service encounter, a set of emotions are elicited, denoted as consumption emotions (Song & Qu, 2017). Consumption emotions tend to influence aspects such as decision-making, which Ribeiro and Prayag (2019) identified as pre-purchase or post-consumption decisions, which also represent outputs of customer behavior (Ribeiro & Prayag, 2019; Richins, 1997). The marketing literature has grappled with understanding customer behavior for years concerning the customer experience, especially during service encounters. For their part, Lemon and Verhoef (2016) point out that the client's experience is determined by a series of contact points that can provoke positive or negative cognitive and affective evaluations; that is, the client's experience affects their own emotions, customer satisfaction, and thus its behavior (Lemon & Verhoef, 2016; Ribeiro & Prayag, 2019; Richins, 1997).

Customer Satisfaction in Service Encounters

The service industry has stood out for providing memorable experiences to customers, inducing their satisfaction and loyalty. Providing quality service is one of the most effective initiatives to affect customer attitudes positively. Frontline employees oversee this during a service encounter (Prentice et al., 2022; Torres, Wei et al., 2019). For instance, the hospitality sector highly depends on the employee's performance during service delivery. In nursing homes, personal encounters between service providers such as caregivers, nurses, and doctors with geriatric customers play a crucial role in customer satisfaction. Positive customer experiences in senior homes seem to come from these social interactions and emotional displays with each other, minimizing loneliness and depression. Employees recognizing facial expressions and understanding emotions can help the customer to develop interpersonal abilities such as empathy and trust (Koc & Boz, 2020; Prentice et al., 2022).

The service industry has considerably grown during the last decades, especially since the industrial revolution in the 18th century. Academics in North America and Europe are taking a new approach to services, viewing them as part of science for their ability to invigorate the economy since, in the US alone, about 80% of workers work in the service sector (Günay & Kurtulmuş, 2021; Holusha, 1989). The impact of the service industry on the world economy and the constant technological innovation have pushed this sector to reinvent itself constantly. Technology combined with Artificial Intelligence (AI) development has bet on bringing top-of-the-line robots from factories to the service industry to compensate for labor shortages, improve the service experience, and reduce operating costs, goals that the marketing field has been fighting with for years in order to increase customers' standard of living (Fusté-Forné & Jamal, 2021; Sorooshian & Panigrahi, 2020; Wirtz et al., 2021).

Artificial Intelligence (AI) in Service Industry

The artificial intelligence concept was introduced by the Dartmouth Research Project to design an intelligent machine that is capable of behaving like a human being (Di Vaio et al., 2020). Expectations from such a machine were correctly interpreting external data, learning to reach specific objectives, and being flexible. Canhoto and Clear (2020) define AI as the technology that can collect, process, and act on data and learn from this process to be able to adapt to changes like humans do. The last decades saw an acceleration in the momentum of AI research and its applications in various disciplines, from space explorations to health.

Artificial intelligence and technology can cheaply execute mechanical, repetitive tasks without room for human error. Thus, some authors such as Frey and Osborne (2017) estimate that up to 47% of US jobs will be vulnerable to automation disrupting service jobs, and service workers will gradually be replaced by robots in the future. (Koster & Brunori, 2021). Traditional full-staff services within the service industry, for example, have been threatened by technology due to the low cognitive and emotional complexity required for the activities carried out there, such as transporting objects and performing tasks monotonous assembly work (Anitsal et al., 2002; Wirtz et al., 2021). In the United States, for instance, a robot has already been developed to cook complex meals and serve customers by replacing an entire staff of employees. (Fauteux, 2021; Koster & Brunori, 2021; Tuomi et al., 2021).

Customers can display multiple emotions based on their human capabilities. EI is considered as the ability to analyze and regulate human emotions and display them (Mayer & Salovey, 1997), which is part of social/emotional skills. Social/Emotional and Cognitive/Analytical skills are examples of customers' mental capabilities that together must function correctly. Abilities such as verbal explanation, listening skills, self-control, and emotional regulation are part of the Social/Emotional skills humans develop from early childhood, as well as Cognitive/Analytical skills such as memory information retention, information processing speed, and logic to solve problems (Liu et al., 2015; Manivannan, 2019). Skills that have begun to be adopted in technology and AI to perform through robots. The evaluation of the state of research leads us to our first proposition.

P1: Customers can perform complex tasks because they have cognitive/analytical, social/emotional, and physical skills, but they may prefer to perform simple tasks and leave repetitive tasks to technology and service robots once they are convinced that they can trust the artificial intelligence that has shown signs of emotional intelligence.

The service industry is being hit by a wave of automation, artificial Intelligence (AI), and service robots. Now, it is sought that service robots also serve in services that require developing highly cognitive, analytical, and physical tasks within service encounters. Such as assisting in medical surgery through voice-activated robotic arms or humanoid robots in higher education that introduce lessons, offer short games to the students while carrying on quizzes through Google Forms, and summarize the lesson (Fusté-Forné & Jamal, 2021; Guggemos et al., 2020; Wirtz et al., 2021). Robots are taking a prominent role in customer service during and after COVID-19, while isolation and restrictions imposed forced service companies to reinvent themselves. Hotels, hospitals, and other companies in the service industry began to replace their frontline employees with service robots. Free virtual assistants like Hyro have been developed, which, through AI and technology, help healthcare companies and their patients assist them with information in the face of customer questions and enable employees to regulate the growing flow of online services users (Abuselidze & Mamaladze, 2021; Paluch & Wirtz, 2020).

With the recent popularity of artificial intelligence (AI) technology and human-robot interaction, the service robot market has grown and is expected to exceed \$30 billion (USD) by 2024 and 41.5 billion (USD) by 2027 (Belanche et al., 2020; Wirtz et al., 2021). Robot integration in society is growing increasingly, which brings up the theory of replacing human work with AI and automation. The Spanish Association of Hotel Managers predicts that by 2023 and 2029, at least 96% of hotel receptionists and 42% of servers in hotels, respectively, will be replaced by autonomous machines and service robots (Belanche et al., 2020; Jia et al., 2021). Despite the great reception that robots have had in the service industry, until today, these autonomous machines effectively perform mechanical and analytical tasks that require, for example, memorization, leaving to human employees' performance of intuitive and empathetic tasks that require judgment and diplomacy, in order to maintain customer service satisfaction typical of the service industry (Dautenhahn, 2001; Jia et al., 2021).

The hospitality sector, for instance, has been a pioneer in robot service adoption. Henna Hotel opened its doors in 2015 in Nagasaki, Japan, with a squad of robots that would help overcome the labor shortage in the rural area where it is based. Guests could find anything from robots at the front desk helping with check-in to robot bellhops transporting luggage to guest rooms (Shead, 2019; Wirtz et al., 2021). The hotel owners wanted to use the robots for everything from making drinks to answering all guest queries. Complex social/emotional tasks naturally began to be demanded by guests, but the robots were not advanced enough to perform many of the tasks guests wanted (Paluch & Wirtz, 2020). Guests started complaining about the lack of knowledge of the frontline robots and the disturbing noises in the middle of the night made by robots-employees due to confusing commands. Robots created more problems than they could solve, forcing managers to lay off 243 robots and bring back frontline human staff in order to keep customers satisfied (Hertzfeld, 2019; Jia et al., 2021).

Service robots are embodiments of the technology and AI created to perform customer service tasks autonomously without human assistance. During any service encounter, customer satisfaction is a primary expected result (Belanche et al., 2020; Prentice et al., 2022; Sayed & Gerwel Proches, 2021). The human-robot interaction is needed to comfort the customer, thus forming a relationship based on emotions and emotional intelligence. Therefore, to achieve comfort and customer satisfaction, the service robot must seek an ideal connection with the customer (Bhagya et al., 2019; Hou et al., 2021). Service robots must be able to reason about customer preferences during the service encounter to achieve affinity. Reasoning based on customer preferences is sound when the commands requested by the customer are not well specified, incomplete, or contradictory. Preferences are based on the customer's history but not what is programmed into the robot. Logic programming can be extended to handle preferences by adding priorities to programmed rules. Preferences are nullable knowledge, as they can be reviewed and updated over time, just like service robots (Bhagya et al., 2019; Navarro et al., 2015; Torres, Hernández et al., 2019).

For example, if a customer asks the service robot to bring him a cola drink, the robot's programming knows that there are healthier options instead of the drink and suggests an iced tea to the customer. In this situation, there may be several reactions. First, the service robot explains the reason for the iced tea suggestion based on its programmed cognitive/analytical capacity, nutritionally informing the customer and explaining the health implications of the cola so the customer reasons and agrees with the robot's suggestion. Second, the customer is dissatisfied with the robot's service because the customer's preferences and requests are not considered when he is denied a cola; therefore, customer satisfaction with the service decreases, and the human-machine relationship looks broken. Third, the robot can reason about the customer's preferences over and above its cognitive/analytical programming and provides cola at the customer's request, thus generating customer satisfaction with the service. (Bhagya et al., 2019; Torres, Hernández, et al., 2019). In an ideal world, reasoning with the robot about the customer's preference would be the ideal way to maintain a close human-robot relationship since it shows empathy with the customer. The current development of service robots lacks social/emotional intelligence. Thus, the most probable answer scenario in the example would be decreased customer satisfaction due to a lack of robot empathy toward customer preferences.

P₂: Service robots cannot perform socially/emotionally complex tasks because they lack social/emotional skills, making close human-robot interaction difficult. Even though service robots do not have preferences like humans, they have restrictions as they are programmed. The availability of neutral training sets to program robots in various service settings is critical for their acceptable performances.

The customer's commands, instructions, status, or situation infer the conformity task that needs to be performed by the service robot. Once the necessary information is provided, the service robot generates a highly relevant and task-oriented service delivery. Robots learn from the information provided by the customer in past interactions, creating a history to improve their responses and adjust their tasks (Kim & Yoon, 2014; Torres, Hernández, et al., 2019). Customer preferences have driven improvements in service robots' design features. Traditionally, robots

were designed for simple tasks that require little cognitive and emotional complexity, such as positioning objects and performing monotonous assembly work. Now, it is sought that service robots also deliver services that require developing highly cognitive, analytical, and physical tasks within service encounters, such as assisting in medical surgery through voice-activated robotic arms, welcoming guests in hotel lobbies, carrying luggage to the guest rooms and even entertaining them (Fusté-Forné & Jamal, 2021; Wirtz et al., 2021).

The interaction between robots and customers is still a field of research. Currently, the interactions during service creation and delivery include conversations with artificial intelligence based on discrete, utilitarian interactions such as basic information or the weather (Choi et al., 2020; Dautenhahn, 2001). When autonomous robots, for example, can interact with natural language and demonstrate behaviors attributable to human qualities, they achieve greater customer acceptance. Facial expressions, voice, and emotions are part of humanlike capabilities that invoke social-psychological processes capable of affecting consumer behavior in different ways, similar to the presence of a human employee (Belanche et al., 2020; Choi et al., 2020; Letheren et al., 2021). The entertainment sector has brought into the industry a concept of a robot called an "animatronic," which physically could be said to look like a human or an animal. Animatronics can mimic simple physical tasks, such as head movements and facial expressions, but do not perform any social/emotional tasks in their interactions with consumers, only performing what they are programmed to do (Otto, 2021; Wiener, 1993). Thus, it is believed that improving social/emotional skills will be vital in improving customer satisfaction with robots.

The affinity and attachment of customers towards machines seem to be more common when similarity is perceived; that is, the robot presents specific, humanlike characteristics (Belanche et al., 2020; Jia et al., 2021; Liu et al., 2022). As well as socio-emotional skills, the robot's physical appearance seems to influence the client-machine interaction positively. A robot's mimicry of physical characteristics of humans, such as eyes, mouth, arms, legs, and gait, or non-physical ones, such as voice, gestures, or personality, increase consumer confidence and influence decision-making related to automation technology (Chuah et al., 2021). Singh and Sellappan (2008) identified a type of robot capable of imitating a human through perception, processing, and action called a humanoid robot. A humanoid robot can be implemented in different environments, from sensitive environments, such as service encounters in the health sector, to harsh environments, such as the defense sector and military use (Chuah et al., 2021; Lyons et al., n.d.; Singh & Sellappan, 2008). While physical human features have already been developed into robots, non-physical human attributes are beginning to be incorporated due to their demand in service encounters to satisfy customers. An example of the incorporation of non-physical human characteristics can be evidenced with Ameca. A UK-based engineering company has developed a humanoid robot called Ameca, which physically resembles a person. Still, it is also capable of expressing human emotions such as surprise, amazement, curiosity, and happiness (Engineered Arts, 2022).

Despite being necessary for the service industry, non-physical characteristics, such as human emotional functions, are challenging to replicate and represent in robots. Humanoid robots are needed to incorporate the ability to show empathy and emotional intelligence and thus maintain the status of social agents in contemporary and future society (Pepito et al., 2020).

Letheren et al. (2021) conducted a study on how a high level of humanity and social interaction influence consumers' tastes toward service robots. The study showed that the scenarios in which the robot could combine verbal and non-verbal communication capabilities in its programming were the most accepted due to the greater opportunity for interaction with the consumer. Humanoid robots must be able to interpret the cause-and-effect relationships that trigger emotions and respond empathetically and appropriately to human sentiments. The implementation of emotional intelligence in service robots will make them seem natural and intuitive, thus improving human-robot interaction (Letheren et al., 2021; Pepito et al., 2020).

Service robots are programmed for friendly interaction with customers, while humanoid robots have the upper hand from the customers' perspective in this interaction. Humanoid robots can help customers with hazardous tasks, such as memorizing data and details (Park, 2020). For example, in Australia, a humanoid robot equipped with an autonomous navigation system and a touch screen has been created to recognize voice commands, give information, and answer questions in the tourism sector. The humanoid robot called Pal Reem offers guided tours through exhibitions and museums. Usually, the tour guides are responsible for providing accurate and up-to-date information (Clunne-Kiely et al., 2017). Humanoid robots are task-oriented since they only consist of the previous programming with the related information. The robots can complete and update information, and their ability to memorize exceeds that of a human employee.

***P3:** When fully developed, humanoid robots are likely to combine social/emotional and cognitive/analytical skills to perform more complex tasks in delivering services due to the improvements in technology and artificial intelligence, achieving a more substantial impact on customers and employees. However, cultural differences in the definition of an acceptable service among humans will make robots' learning and training process even more challenging.*

The goal of technological and AI advances is to achieve the adoption of human capabilities by service robots. One of the most impressive innovations in service robots is the development of humanoid robots, which include human appearances such as facial features, arms, and legs (Liu et al., 2022). Humanoid robots currently lack feeling AI and cannot genuinely express emotions, so they cannot fully satisfy customers in the service industry (Chiang et al., 2022). Incorporating emotions and emotional intelligence in humanoid robots is quite a challenge. Song and Kim (2022) found that robots equipped with a human appearance and humanlike social and emotional capacity increase the level of customer trust and acceptance. Humanoid robots are more efficient than human employees in performing complex tasks requiring greater precision and consistency since they leave no room for physical wear and tear and human error. If humanoid robots manage to imitate human social interactions autonomously, just as they do with physical ones, they would be at a higher level than humans in terms of customer satisfaction since there would also be no room for emotional discomfort, which is possible in traditional employees. (Chiang et al., 2022; Letheren et al., 2021).

MANAGERIAL IMPLICATIONS AND FUTURE RESEARCH AVENUES

Technology and AI have advanced to the point of developing emotional intelligence skills in robots, such as the perception, assimilation, understanding, and management of emotions, to achieve the much sought-after genuine and natural human-robot interaction (Chiurco et al., 2022). Robots and customers are needed to develop emotional connections that can overcome current interaction limitations, forming a deeper intimacy. However, Fauteux (2021) states that robots may never experience emotions like humans, creating a constant limit with customers. Chiang et al. (2022) argue that to develop emotional connections, one must have intimacy, which should begin as a companionship process in which the customer's perception is linked to the security and empathy the robot provides. Authors such as Jia et al. (2021), Letheren et al. (2021), and Fauteu (2021) have also identified a close relationship between the positive perception of customers and the level of anthropomorphism of robots.

In addition to their physical similarity to human beings, anthropomorphic robots or humanoid robots have also shown similar psychological states by recognizing customers' facial emotions, movements, or sounds under experimental conditions. The Japanese roboticist Masahiro Mori coined the uncanny valley theory in 1970, as mentioned by Belanche et al., 2020. Mori (1970) proposes that the relationship between anthropomorphism in robots and customer acceptance is based on the human likeness of robots, such as eyes, hair, and skin; however, human likeness can turn comfortless at a certain point. (Song & Kim, 2022). Despite the excellent technological and physical features implemented in humanoid robots, their lack of social/emotional skills, emotional intelligence, and difficulty in expressing themselves naturally and genuinely still prevent them from creating comfort in customers and, therefore, from replacing human employees in the service industry.

In the search to copy humans, the lack of naturalness and genuineness of the expressions of humanoid robots creates fear in customers. For example, a humanoid robot named Pepper was designed to communicate naturally with customers through built-in microphones and a tablet. The humanoid robot can express feelings and sense the emotions of others by detecting the user's facial expressions, voice, and behavior and then responding accordingly. Pepper's tablet also allows him to communicate non-verbally in a much wider variety than any human, for example, by showing colors in his eyes as a sign of emotions; his eyes turn green to deliver happiness and red to show anger. Despite being quite technologically advanced, these types of expressions are still not genuine, which generates customers' insecurity and fear of these expressions. (Chiang et al., 2022; Rozanska & Podpora, 2019).

Japan, South Korea, the United States, and some European countries invested significant funds in robotics research and development, and service robots' popularity has been evident (Ward & Ashcraft, 2010). AI rarely leaves its mark in countries like Brazil, Peru, and Latin America. AI has gained popularity in sectors such as agriculture as an alternative to improve the speed and precision of crop planting techniques, but in the service industry, it does not sound like much. According to Miscion (2015), many people consider robots as a materialization of nightmares and fears where humans break the limits of religion and play God, creating "life,"

that is, robots with human appearance, as mentioned by Ramírez Plascencia (2020) in his document.

In the case of Latin America, the backwardness in technological development affects the popularity of service robots. AI and robotics have a long way to go before positively impacting non-tech markets. Culture, lack of trust in technology, and religion can be a thorn in service robots and customer relationships (Ramírez Plascencia, 2020). Unlike countries with developed economies, Latin American countries seem to be threatened with mass unemployment in the face of robotization and automation. According to a report by the Economic Commission for Latin America and the Caribbean (ECLAC), services are a predominant sector in the economies of Latin America and the Caribbean, representing 70% of GDP and 62% of total employment in 2015 (CEPAL, 2022; Schuster, 2018). As in other sectors of the economy, part of the future dynamism of services will depend on their automation; however, the Latin American employment culture is structured around informality. According to a report presented by ECLAC, the International Labor Organization (ILO) indicates that in 2016, 53.1% of workers in the region, equivalent to 130 million people, were in informal employment for their account and itinerant trade (Arciniegas, 2020). Poor labor policies prevent technological innovation from playing its role in productivity as it did in countries like Japan, the United States, and Germany. Distrust in technology derives from the possibility of generating high unemployment in the industry due to the lack of infrastructure for technological innovation and the absence of labor and economic guarantees by Latin American governments.

For its part, religion plays a vital role in preventing the adoption of robots since believers classify artificial intelligence as a false creator of "life" beyond the limits of faith and God by incorporating robots with human appearance and display of natural qualities of human beings (Ramírez Plascencia, 2020). Researchers such as Chiang et al. (2022) and Kose and Sakata (2019) believe that in the future humanoid robots will penetrate society so much that they can imitate humans' emotional processes, such as establishing intimate relationships or even feeling love. However, this prediction may not be reflected simultaneously throughout the world. Thus, cultural differences in customer satisfaction with the services provided in different markets should be considered in searching for the development of emotional intelligence in robots.

To smoothly implement robots in the service industry in countries with little technological development, this study suggests the development and implementation of policies to identify the levels of affectation that automation has in each industry and thus determine the possibility of technological investment in each. Automation implies a significant economic effort for many industries, so it is necessary to highlight the tax benefits and payroll savings of replacing a human employee with a robot (Naum Avila, 2021). Labor markets, for their part, should provide the tools to face exponential changes, and countries are required to support the transition of workers by offering social benefits. According to the Inter-American Development Bank (IDB), one aspect Latin America should evaluate for accelerating its automation process is the positive experience of technology adoption of developed countries prepared them for change and the benefits observed after the adoption of technology-driven by COVID-19 (Ripani et al., 2020).

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IMPACT OF COVID-19 ON BUSINESS AND HUMAN RESOURCE PRACTICES: EVIDENCE FROM A LOCAL SURVEY

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ABSTRACT

COVID-19 has had a tremendous impact on many businesses across the sectors. Many pre-COVID-19 business and human resource practices have changed permanently as new employment patterns, consumer habits, and supply-chain relations emerged. The manufacturing sector was not immune to these changes. This study provides evidence from a local survey of manufacturing companies regarding the impact of COVID-19 on the business practices, human resource practices, and training needs of companies to respond to the changing patterns of doing business in the manufacturing sector. The findings of this study suggest that the magnitude of the impact of COVID-19 on general business practices is mixed. While 90 percent of businesses indicated that COVID-19 impacted their operations, not all are negatively impacted. For many businesses, the cost of doing business has increased due to employment and supply-chain-related issues. However, some businesses benefited from COVID-19 as their business volumes and profits improved substantially.

Keywords: COVID-19, Human Resource Practices, Business Practices, Training Needs, Manufacturing Sector, Impact

INTRODUCTION

COVID-19 emerged as one of the major disruptive forces in the last several decades, creating havoc across businesses and nations. Soon after the COVID-19-related shutdown occurred, the priorities of many companies, including manufacturing, changed compared with the pre-COVID-19 period (Arik et al., 2021). A comprehensive review of the literature suggests that companies in the manufacturing sector have started reassessing their business and human resource management strategies in the face of changing supply-chain dynamics and workforce-related challenges (Ardolino et al., 2022). There is a growing body of literature related to the challenges brought about by COVID-19. This study contributes to this growing body of academic literature by presenting unique local survey results conducted in 2021.

The primary motivation of this research is to understand and analyze the impact of COVID-19 on human resources, business operations, and training needs through a comprehensive survey of manufacturing firms in Tennessee. Since many of the business practices associated with COVID-19 have become the new normal for businesses, it is essential

to analyze, through fieldwork, how changes affect the organizational dynamics perceived by the manufacturing sector's human resource managers.

This study first introduces a brief literature review. Second, a methodology section will highlight the data source, research questions, and analysis method. Third, findings for business operations, human resource practices, and training needs will be presented. Finally, an implication and conclusion section will follow.

LITERATURE REVIEW

Impact on manufacturing operations and human resource practices

The manufacturing sector plays a vital role in economies across the world. Because of its importance, many governments pay close attention to the factors affecting this critical sector. Disruption from the COVID-19 pandemic has caused major upheavals in manufacturing and has severe implications for production networks and the demand and supply chains underpinning manufacturing operations (Kapoor et al., 2021). The pandemic will permanently affect how firms navigate their strategic choices related to how governments regulate manufacturing and global trade policies in the future (Dür et al., 2020; Pinna & Lodi, 2021).

The systematic literature review reveals whether supply chains and production networks were not up to the challenge of withstanding the pressures of lockdowns and other safety protocols, including product and workforce shortages. These led to closed facilities, reduced capacities, increased costs, and severe economic uncertainty for manufacturing businesses. In managing these challenges and stabilizing their operations, manufacturers were urgently investing in digital technologies, undertaking resource redistribution and repurposing, regionalizing and localizing, and targeting policies to help them survive in this altered economy ((Dür et al., 2020; Pinna & Lodi 2021).

Kapoor et al. (2021) provide seven management interventions that manufacturing firms can undertake to contain a pandemic similar to COVID-19. These are (1) localizing and regionalizing production, (2) valuing networks, (3) supplying chains, (4) reconfigurability and repurposing, (5) coopetition (collaboration among business partners) and collaborative manufacturing, (6) lean and agile manufacturing techniques, (7) digital technologies, service provision, and government policies. Regarding the implications associated with each intervention, the most viable options for manufacturing firms are coopetition (collaboration among business partners), collaborative manufacturing, and lean and agile manufacturing techniques.

Rapaccini et al. (2020) note that at one point during the pandemic, United States (U.S.) industrial production recorded the most significant monthly decline since the Second World War (Harris et al., 2020). Before the pandemic, manufacturing production in 2019 recorded a global economic slowdown, which became a worldwide economic crisis with COVID-19 (Teng et al., 2021).

Manufacturers continually battle challenges of liquidity and profitability, and COVID-19 has made them even more vulnerable to economic shocks. During an economic storm, the manufacturing sector experiences canceled orders, poor revenues, and falling stock prices. Such

instabilities and unpredictable market environments (Linton & Vakil, 2020; Paul & Chowdhury, 2020b) create panic in the industry, resulting in market anomalies and distorted supply-demand patterns (Khoo & Hock, 2020). While management of supply chain disruptions (i.e., unexpected events with severe negative impacts such as tsunamis, fires, or strikes) has grown into a mature research topic for the last two decades (Sawik, 2020), the COVID-19 pandemic has been viewed as a new type of disruption quite unlike any seen before (Ivanov & Das, 2020).

Lim (2021) conducted an in-depth interview with representatives from 22 manufacturing companies to understand how the pandemic-related challenges are tackled. The primary response strategies for manufacturing companies are adopting ICT tools for virtual business processes, with proactive business change and diversification measures such as automation. This study highlighted the significance of automation and digitalization towards resilience and adaptability of manufacturing-related companies against the impacts of the pandemic.

The COVID-19 pandemic caused a significant shock to manufacturing companies, affecting many business processes. Many companies took countermeasures, including remote work (Sharma et al., 2020), to contain the impact. According to Moon et al. (2021), although the outbreak generated significant changes in business practices, the transition was not painless in some cases because of the resistance to change. The outbreak and government regulations have forced manufacturing companies to reinvent their organizational strategies (Moon et al., 2021).

Specifically, the government lockdown policies dramatically affected business practices and consumer behaviors, pushing companies to be creative in doing business in this new environment (Ivanov and Dolgui 2020a, b; Liu et al., 2021). Many have shifted their production to essential items, such as PPE (personal protective equipment), masks, and sanitary products (Telukdarie et al., 2020). Many manufacturing companies faced workforce shortages due to travel restrictions limiting manufacturing organizations' access to skill pools in other regions (Bastas & Garza-Reyes, 2022). The COVID-19 pandemic posed a need for human resource managers to consider or strategize new methods of adapting to challenging times. Remote working is one of the new emerging methods that most organizations have adopted to maintain smooth operations and quality client services (McKibbin & Fernando, 2020), as well as the reskilling and upskilling of the workforce (Hamouche, 2021)

Liu et al. (2021) examine how repurposing during the pandemic led to more manufacturing innovation. They collected data on 80 UK-based firms that undertook repurposing to produce PPE products. The study's authors discovered that these firms had successfully repurposed by utilizing specialization and technology-driven flexibility. Their findings illustrate how manufacturing firms collaborating in repurposing within their ecosystems are crucial for increasing productivity and fostering change in an industry struggling with supply chain disruptions.

Lim et al. (2021) conducted a survey. They found that the significant determinants of the pandemic's impacts on manufacturing, adaptation actions, and future research directions can be triangulated across organizational, process, and technology perspectives. They also found that the significant impacts of the COVID-19 pandemic on manufacturing have been lockdowns and shutdowns associated with fluctuations in supply and demand, social distancing and remote work imposition, and changes in consumer behavior patterns. The adaptation actions to combat the

pandemic have been manufacturing repurposing, remote work, layout and workplace reconfiguration, workforce reorganization, and business model innovation with associated strategic changes.

Overall Impact of COVID-19 on Manufacturing Operations

Since the inception of the pandemic, massive lockdown measures were witnessed in most countries, where economic and social activities were deliberately limited to contain the spread of the virus. During the pandemic, sudden demand spikes and a decrease in raw material supply caused a dual disruption for manufacturers who produce high-demand items (Ivanov & Dolgui, 2021). Companies were trying to improve their supply chain resilience by sourcing local suppliers and actively adopting additive manufacturing (AM) technology to reduce reliance on the global supply chain.

In 2021, Lim et al. (2021) surveyed 22 manufacturing-related companies impacted by the pandemic, investigating the main challenge of manufacturing-related companies and their associated response in overcoming the described challenge. This survey involved 22 manufacturing-related companies and was conducted at a manufacturing-focused trade virtual exhibition. According to the study findings, these companies' top three challenges were disruptions in business sales and marketing activities, meeting difficulties, and lockdown measures. The primary response strategies to the challenges included adopting ICT tools for virtual meetings, marketing, and customer support. The survey also revealed that companies pursued proactive efforts for business diversification.

Fombella et al.'s (2022) study found that the firms built significant resiliency to COVID-19 because they excelled in adapting to new technologies, providing flexibility to employees, and gaining stakeholder commitment to company strategies. The results of the descriptive techniques used in this study showed that pandemic resiliency depends on firms' ability to adequately balance their technological abilities, human resources, and production processes.

All manufacturing organizations implemented new health and safety measures driven by the government's legislation. These measures were further supplemented by regular disinfection processes across raw materials, recycled products, and factory spaces, which became a prevalent theme across the manufacturing sectors (Bastas & Garza-Reyes, 2022). Almost all the manufacturing sectors were noted to be detrimentally affected by the pandemic in financial terms, suffering from dramatic reductions in demand of up to 75% in some industries. Such a sharp decrease in financials was driven by the shrinkage in crucial markets, including the export markets, and periods of lockdown that enforced factory shutdowns in most manufacturing sectors. The reduced demand rates further resulted in under-utilized resources and production capacities. They brought together financial cash flow problems due to organizations struggling to receive timely payments, which has a domino effect in the sectors. Increased raw material costs deepened these economic effects due to the pandemic. They were established as a significant cause of concern for the economic sustainability of manufacturing organizations.

It was indicated that the pandemic made it much more difficult for manufacturing organizations to identify and relocate competent and qualified employees at the heart of manufacturing operations that rely on technical skills. Moreover, several organizations suffered

from losing their key employees as they could not return from abroad and stemming from cash flow issues: some businesses experienced staff losses to other less affected sectors such as governmental institutions. Transportation during the pandemic was also a challenge faced by the manufacturing firms in the country. Many countries restricted international and domestic flights; borders were closed, affecting road and rail transport. Such initiatives negatively affected the supply chain of manufacturing organizations (Kavindi et al., 2021).

Impact of COVID-19 on Business Operation

While almost all manufacturing firms worldwide were affected by COVID-19, the demand for necessities such as food items, sanitizers, toilet paper, and medicines has increased expeditiously. However, the market demand for sports and garment items drastically declined (Bagshaw & Powell, 2020).

The primary innovative measure introduced during the COVID-19 pandemic has certainly been remote work. This re-organization of work has spread persuasively across all sectors, changing people's traditional work habits. The few empirical contributions in this literature have shown that although companies have efficiently introduced remote work in the white-collar departments, little or nothing has been achieved for the work of blue-collar departments (Rapaccini et al., 2020). A study conducted by Kumar and Abdin concluded that there was a significant change in consumers' consumption patterns due to the COVID-19 pandemic, and now they are spending on products and services essential for their day-to-day lives (Kumar & Abdin, 2021).

According to Yeganeh (2021), even though traditional retailers in the food industry suffered from the effects of lockdowns, reputed retailers reported a significant boost in sales. Compared with other sectors, the manufacturing industry, which provides necessary food items, increased sales, and its sales turnover was significantly affected by COVID-19 (Aftab, Naveed, & Hanif, 2021). The number of available food products on the market decreased due to the lockdowns. This led the food manufacturing companies to redesign their business strategies to cope with COVID-19 (Yeganeh, 2021).

Another significant consequence of COVID-19 is that businesses relied more on intangible assets and technological improvements while reducing the number of employees (Yeganeh, 2021). Because of the COVID-19 outbreak, large and medium-scale companies looked for small companies to help them overcome their difficulties. Considering the past four decades, we can identify that those large-scale companies have continued acquiring increasingly small-scale businesses to grow their market power. There is an increasing trend of that acquisition with the advent of Covid-19. Even amid this world crisis, fewer large-scale companies have raised their power and market shares and become much more potent (Yeganeh, 2021). Numerous studies have highlighted the importance of new models, such as the transition to more service-oriented business models, continuous investment in the latest technologies, and advanced services for the firms to a better position amid this pandemic (Rapaccini et al., 2020).

Teng et al. (2021) explore the effect of financial flexibility on the enterprise performance of Taiwan's manufacturing industry during the COVID-19 pandemic. The authors collected data from the Taiwan Stock Exchange and analyzed it. The results illustrated that financial flexibility

significantly and positively affects enterprise performance for manufacturing companies on the Taiwan Stock Exchange.

There are several reasons for the current shortage of laborers in business operations. Most of these workers are baby boomers, who are aging and leaving the workplace. Unfortunately, COVID-19 did not help with this situation, mainly affecting those in this generation (Professional Safety, 2022). Those working decided to stay home rather than return to their workplace. Moreover, fewer younger workers are pursuing careers in manufacturing and other skilled trades. Thus, it can be denoted that workers are leaving but not entering. Furthermore, due to the scarce supply of laborers in the manufacturing sector, employers are vying for talented and experienced workers. As a result, there is much movement within this industry. The low unemployment rate has led to a smaller pool of skilled applicants, which has caused a few more challenges than just no laborers; fewer skilled and competent workers mean fewer eyes and ears to spot safety concerns in the workplace. Fewer skilled workers also result in longer hours, leading to fatigue and a decline in the employee's overall wellness.

METHODOLOGY

Data and Research Questions

The 2021 Wage and Benefits Survey included three questions regarding the impact of COVID-19 on various aspects of the companies' operations in the manufacturing sector. The survey asked three open-ended questions regarding the impact of Covid-19 on

- the companies' training needs
- the companies' human resource practices
- the companies' overall business operations.

The open-ended answers to these questions were carefully reviewed and standardized. After data cleaning and standardization, qualitative data analysis software was used to identify each question's cluster of responses and keywords. The number of companies responding to each question varies, but the following response rate was recorded for each question (response rates are in parentheses):

- Number of manufacturing companies contacted: 1,200
- Number of companies responding to “training needs”: 216 (18%)
- Number of companies responding to “human resource practices”: 228 (19%)
- Number of companies responding to “overall business operations”: 241 (20%)

Analysis Method

The survey regarding the impact of COVID-19 on human resource practices and business operations included open-ended questions. A text-analysis software, WordStat*, was used to process the qualitative data. The respondents are allowed to input up to three responses for each question. The answers to the following three questions were analyzed:

- How has COVID-19 impacted your training needs?
- How has COVID-19 impacted your human resource practices (H.R.) practices?
- How has COVID-19 impacted your overall business practices?

The qualitative data analysis includes three types of results: (1) key topics mentioned in the responses, (2) cluster analysis grouping similar responses, and (3) key phrases that appear throughout the responses. The qualitative analysis includes the frequency of words, the percent of cases, and a statistical measure, TF*IDF, which measures how relevant a word is to a document in a corpus.

RESULTS

The results are organized for each question under two segments: (1) cluster analysis and (2) key topic analysis. For the last question, phrase analysis is also included. The cluster analysis groups similar responses together, while key topic analysis identifies the most frequently used keywords to describe the impact of COVID-19 on different aspects of companies' operations in the manufacturing sector.

Impact of COVID-19 on Training Needs

How has COVID-19 impacted your training needs? Out of 1,200 manufacturing companies contacted, a total of 216 companies responded to this open-ended question.

Cluster Analysis. The cluster analysis shows that 33.8 percent of respondents claimed that COVID-19 did not have or had little impact on their training needs. In other words, Covid-19 impacted the training needs of two-thirds of the respondents. Table 1 identifies about eleven clusters from the open-ended responses regarding COVID-19's impact on the training needs of manufacturing companies.

The first column in the table shows the cluster number, second cluster name, third percent of responses, and the final column up to three sample responses from the open-ended responses. The top clusters are (1) no impact (33.80%); (2) virtual training (9.26%); (3) training challenges because of social distancing (6.48%); (4) lack of in-person training (5.56%); and (5) class size and frequency of training (5.09%).

Table 1. The Covid-19 Impact on Training Needs: Cluster Analysis

Cluster Number	Cluster Name	Percent of Responses	Sample Responses
1	No or very little impact	33.80%	(1) No impact (2) Very little impact
2	Yes	3.24%	(1) Yes, there has been an impact
<i>Qualified responses</i>			
3	Lack of in-person training opportunities	5.56%	(1) In PERSON has had to go to online webinar training. (2) In PERSON training halted. Virtual training when effective (3) It has prompted us to stop all in PERSON training.
4	Virtual training	9.26%	(1) We have had to go VIRTUAL TRAINING (2) TRAINING has moved to basically VIRTUAL sessions (3) All TRAINING moved to VIRTUAL learning which isn't as effective.
5	Training change because of CDC guidelines	2.31%	(1) Company had to pivot to follow CDC GUIDELINES (2) Yes, because of the CDC GUIDELINES we could not conduct TRAINING . (3) We have had to modify our TRAINING practices to the current CDC GUIDELINES .
6	Training challenges because of social distancing	6.48%	(1) Very DIFFICULT to have TRAINING due to limited space and number that can attend at one time. (2) Some classes canceled or POSTPONED due to exposure and the need for more space for social distancing. (3) Trainings that were not necessary were POSTPONED due to COVID-19.
7	Class size and frequency of training	5.09%	(1) FREQUENCY of TRAINING and SIZE of CLASSES . (2) We have had to space out TRAININGS and CLASSES . (3) More virtual CLASSES needed due to limited space and high number of employees needing the TRAINING .
8	Limiting training ability	4.17%	(1) LIMITED our ability to do in person TRAINING ; have moved to more online TRAINING (2) TRAINING has been LIMITED due to social distancing (3) LIMITED our ability to gather employees together in large groups. LIMITED our ability to travel offsite for TRAINING .
9	Use of smaller groups in training	4.17%	(1) SMALLER GROUPS of TRAINING and more need to TRAIN due to absences caused by COVID-19 (2) We do SMALLER GROUPS and do not do any outside TRAINING (3) Takes a long time for TRAINING in SMALL GROUPS
10	Eliminating group training sessions	2.78%	(1) We have not had TRAINING SESSIONS since COVID (2) Reduced GROUP TRAINING SESSIONS . (3) Yes, not ABLE to GATHER in large GROUP meetings.
11	Unable to meet, travel, and train	3.70%	(1) Unable to PARTICIPATE in TRAINING (2) We are UNABLE to provide classroom TRAINING . (3) We are not really able to travel much for training and our company does not allow any VISITORS

Source: Author (s)' analysis from 2021 Wage and Benefits Survey

Key Topics about the Impact on Training. Table 2 shows the key topics and the associated keywords that emerged throughout the text responses regarding the impact of COVID-19 on the training needs of manufacturing companies. This analysis is similar to the cluster analysis presented in Table 1 but gives additional details on the keywords used to describe the impact of COVID-19 on the training needs. Social distancing, moving in-person

training to virtual training, smaller group training, and guidelines and workplace requirements appear across the responses.

Table 2. The Impact of Covid-19 on Training Needs: Key Topics

TOPIC	KEYWORDS	COHEREN	FRE	CASE	%
NUMBER PEOPLE	NUMBER; PEOPLE; VISITORS; LIMITED; SITE; TIME; ROOM; REDUCED; SPACE;	0.443	20	14	4.53%
COMPLETE REQUIREMENTS	COMPLETE; REQUIREMENTS; EMPLOYEES; TIME; VIRTUAL; TRAINING; SESSIONS; SITE;	0.360	35	25	8.09%
GROUP MEETINGS	GROUP; MEETINGS; SESSIONS; REDUCED; ROOM; DISTANCE; IMPACTED;	0.360	19	13	4.21%
TRAVEL OFFSITE	TRAVEL; OFFSITE; ABILITY; LIMITED; EMPLOYEES; VISITORS;	0.358	13	8	2.59%
SMALLER GROUPS	SMALLER; GROUPS; REQUIRED; COVID; TRAIN; TRAINING; ONLINE; SMALLER GROUPS;	0.355	30	25	8.09%
SOCIAL DISTANCING	DISTANCING; SOCIAL; DIFFICULT; REQUIREMENTS; PRACTICES; SOCIAL DISTANCING;	0.351	46	40	12.94%
CDC GUIDELINES	CDC; GUIDELINES; REQUIRED; TRAININGS; TRAIN; PRACTICES; CDC GUIDELINES;	0.327	30	14	4.53%
PERSON TRAINING MOVED	PERSON; MOVED; ONLINE; VIRTUAL; TRAINING; ABILITY; PERSON TRAINING; VIRTUAL TRAINING; ONLINE TRAINING;	0.321	38	36	11.65%
FREQUENCY OF TRAINING AND SIZE	SIZE; FREQUENCY; CLASSES; FREQUENCY OF TRAINING AND SIZE;	0.320	19	12	3.88%

Source: Author (s)' analysis from 2021 Wage and Benefits Survey

Impact of COVID-19 on Human Resource Practices

How has COVID-19 impacted your human resource practices (H.R.) practices? Two hundred twenty-eight manufacturing companies responded to this open-ended question in the survey.

Cluster Analysis. The cluster analysis illustrates that 16.67 percent of respondents claimed that Covid-19 did not have or had a minor impact on their human resource practices. In other words, Covid-19 impacted the human resource practices of nearly 85 percent of the respondents. Table 3 identifies about twelve clusters from the open-ended responses regarding COVID-19's impact on the human resource practices of manufacturing companies.

The first column in the table shows the cluster number, second cluster name, third percent of responses, and the final column up to three sample responses from the open-ended responses.

The top clusters are (1) no impact (16.67%); (2) new human resource policies and procedures (10.09%); (3) yes, major impact (9.21%); (4) challenges regarding attendance policies and paid leave (7.89%); (5) challenges dealing with CDC guidelines and other regulations (6.14%), and (6) challenges associated with in-person meeting and social distancing.

Table 3. The Covid-19 Impact on Human Resource Practices: Cluster Analysis

Cluster Number	Cluster Name	Percent of Responses	Sample Responses
1	No impact	16.67%	(1) No impact (2) It has not IMPACTED our PRACTICES
2	Yes	9.21%	(1) Yes, major impact
<i>Qualified responses</i>			
3	Limited our interactions and made it difficult to hire	3.95%	(1) LIMITED our interaction with large groups. (2) Over all it was stressful and DIFFICULT. (3) Reporting cases are very DIFFICULT and have affected attendance a lot.
4	Hard to understand requirements and time consuming	2.63%	(1) More time UNDERSTANDING requirements and communicating them to others. (2) Hard to UNDERSTAND. (3) The administration of these protocols is TIME CONSUMING.
5	Dealing with CDC guidelines and other regulations	6.14%	(1) We have had to modify attendance and work with our COVID and EHS team to stay up to date with all CDC GUIDELINES. (2) Managing paid sick leave, changing CDC and DOL GUIDELINES. (3) Increased due to extra GUIDELINES, absences and quarantine policies
6	Challenges regarding attendance policies and paid leave	7.89%	(1) CHALLENGES have ARISEN in COMMUNICATIONS BASED on INTERACTION with EMPLOYEES and ADMINISTERING an ATTENDANCE POLICY/LEAVES, etc. (2) Greater CHALLENGES with ATTENDANCE, staffing, and LEAVE POLICIES. (3) Training EMPLOYEES on POLICY changes.
7	Problems with interviews and onboarding	4.82%	(1) Virtual INTERVIEWS and ONBOARDING as required (2) We have had to implement new policies concerning INTERVIEWING and ONBOARDING, we practice mask wearing, do regular temp checks, and practice social distancing. (3) We have had to lower the NUMBER of ORIENTATIONS/trainings we can do at one TIME
8	Challenges associated with in-person meeting and social distancing	6.14%	(1) Only small group MEETINGS allowed, so we have to have more of them - to permit social distancing. (2) In PERSON gatherings have to be adjusted to small groups spread out over time. (3) Employees are working remotely, absenteeism has gone up, on-boarding new employees due to SOCIAL DISTANCING.
9	Increasing flexible work schedule	2.63%	(1) More FLEXIBLE with SCHEDULES and TIME off. (2) There has been a need to be more FLEXIBLE with TIME off due to school SCHEDULES or lack of child care. (3) We have added a flexible work schedule policy that allows employees the opportunity to work from home if their position allows for it.
10	New HR policies and procedures	10.09%	(1) We have had to add PROCEDURES and POLICIES. (2) Implementing changes in work PROCEDURES and safety practices. (3) Increased record keeping and added infection related PROCEDURES.
11	Tracking and Screening employee issues	4.39%	(1) A lot of hours SPENT on TRACKING employees on leave and contract TRACING. (2) We are now TRACKING who is out for qualifying paid sick time due to COVID. (3) Tracking, SCREENING, remote WORK, communication, etc.
12	Work from home challenges	5.26%	(1) We have had to develop a WORK from HOME policy, along with supporting those who could WORK from HOME (2) More dealings with the option of WORKING from HOME (3) We have started handling HR practice through MSTeams meetings, had HR department rotate WORKING at HOME

Source: Author (s)' analysis from 2021 Wage and Benefits Survey

Key Topics about the Impact on Human Resource Practices. Table 4 shows the key topics and the associated keywords that emerged throughout the text responses regarding the impact of COVID-19 on the human resource practices of manufacturing companies. This analysis is somewhat similar to the cluster analysis presented in Table 3 but gives additional details on the keywords used to describe the impact of COVID-19 on human resource practices. Covid-related issues, screening and temperature checks, CDC guidelines, and social distancing appear across the responses.

TOPIC	KEYWORDS	COHEREN	FRE	CASE	%
ARISEN IN COMMUNICATIONS BASED ADMINISTERING AN ATTENDANCE POLICY LEAVES	ADMINISTERING; ARISEN; BASED; COMMUNICATIONS; INTERACTION; LEAVES; CHALLENGES; ATTENDANCE; POLICY; EMPLOYEES; ADMINISTERING AN ATTENDANCE POLICY LEAVES; ARISEN IN COMMUNICATIONS BASED;	0.799	95	26	8.41%
SOCIAL DISTANCING	SOCIAL; DISTANCING; WEARING; MASK; MASKS; FACE; YEAR; SOCIAL DISTANCING;	0.448	45	29	9.39%
VIRTUAL EVENTS	VIRTUAL; EVENTS; NUMBER; FOCUS; REQUIRED; EMPLOYEE; QUARANTINE; TESTING; INCREASED; PROTOCOLS; INTERVIEWS; COMMUNICATION;	0.444	43	19	6.15%
CDC GUIDELINES	GUIDELINES; CDC; SITE; IMPACTED; PRACTICES; PEOPLE; HR; WORKING; TEAM; CDC GUIDELINES; HR PRACTICES;	0.440	43	35	11.33%
SCREENING TEMPERATURE	SCREENING; TEMPERATURE; WORK; MEASURES; COMMUNICATION; TRAINING; RETURN; MASKS; WEARING; REMOTE; UNEMPLOYMENT; TRACK; EMPLOYEES; HEALTH; TRACKING;	0.431	48	37	11.97%
SPENT LOT	SPENT; LOT; TRACKING; TIME; CASES; DEPARTMENT; PROCEDURES; PRACTICES;	0.417	27	19	6.15%
COVID RELATED	RELATED; COVID; ADDED; ABSENCES; PROCEDURES; SAFETY; ISSUES; POLICIES; INCREASED; ADDITIONAL; EMPLOYEE; COVID RELATED;	0.414	53	47	15.21%
CONTACT TRACING	CONTACT; TRACING; CHECKS; QUARANTINE; TEMPERATURE; PROTOCOLS; EMPLOYEES; ADDITIONAL; COVID;	0.406	34	22	7.12%
SICK LEAVE	PAID; LEAVE; SICK; FFCRA; YEAR; TRACKING; CASES; CDC; FOCUS; TRACING; SICK LEAVE;	0.394	39	28	9.06%

Source: Author (s)' analysis from 2021 Wage and Benefits Survey

Impact of COVID-19 on Overall Business Practices

How has COVID-19 impacted your overall business practices? A total of 241 manufacturing companies responded to this open-ended question in the survey.

Cluster Analysis. The cluster analysis shows that only 9.13 percent of respondents claimed that COVID-19 did not have or had a negligible impact on their overall business practices. In other words, Covid-19 impacted the overall business practices of more than 90 percent of the respondents. Table 5 identifies about ten clusters from the open-ended responses regarding COVID-19's impact on the general business practices of manufacturing companies.

The first column in the table shows the cluster number, second cluster name, third percent of responses, and the final column up to three sample responses from the open-ended responses. The top clusters are (1) challenges associated with social distancing, mask, and cleaning

(16.60%); (2) yes, major impact (10.37%); (3) no, minimal impact (9.13%); (4) effect on every aspect of the business (7.05%); (5) new way of doing business: working remotely (7.05%), (6) work from home challenges and scheduling (6.64%) and (7) a major impact on absenteeism and other workplace issues (6.22%).

Table 5. The Covid-19 Impact on Overall Business Practices: Cluster Analysis

Cluster Number	Cluster Name	Percent of Responses	Sample Responses
1	No impact	9.13%	(1) No impact (2) Minimal
2	Yes	10.37%	(1) Yes, major impact
<i>Qualified responses</i>			
3	Major impact on Absenteeism and other workplace issues	6.22%	(1) ABSENTEEISM spike, increased hours for other employees, moving meetings to zoom (2) Increased ABSENTEEISM . (3) Customer closures, delayed parts, ABSENTEEISM with employees
4	Effect on every aspect of the business	7.05%	(1) COVID-19 forced the BUSINESS to become creative in the way every day BUSINESS was conducted. (2) Covid has impacted every part of most our lives including BUSINESS . (3) In a POSITIVE way
5	Dealing with CDC guidelines and other regulations	5.81%	(1) Necessary changes made throughout the company to comply with CDC GUIDELINES . (2) We have followed strict quarantine GUIDELINES when necessary. (3) We have followed the more stringent of corporate and/or TN Health Department GUIDELINES .
6	Production delays, increased cost, product delivery problems	4.15%	(1) Creates ripples and DELAYS with DELIVERY of materials and supplies. (2) INCREASED cost of doing business and slowed many processes down. (3) The shortage of employees showing up affects our CUSTOMERS and suppliers as well, so we get DELAYED and less information from our CUSTOMERS , and have more DELIVERY problems from our suppliers.
7	Challenges associated with social distancing, mask, and cleaning	16.60%	(1) EMPLOYEES are for the most part not happy about WORKING with MASKS on in a factory ENVIRONMENT . (2) We have enforced WEARING MASK , we do temperature screening, and SOCIAL distancing. (3) Many risk mitigation practices in the workplaces such as masks, SOCIAL DISTANCING , and extensive cleaning.
8	In-person meeting, virtual meetings, and communication issues	5.81%	(1) We conduct more VIRTUAL MEETINGS , we have had to find new areas for our crews to MEET . (2) Salary employees working from home more, virtual MEETINGS have replaced most in PERSON MEETINGS . (3) Limited our ability for in PERSON MEETINGS and social connection with our employees.
9	Work from home challenges and scheduling	6.64%	(1) We have also shifted to a rotating in-person work- SCHEDULE . (2) We are having to WORK more from HOME and do less traveling. (3) Yes, when able, EMPLOYEES can WORK from HOME , slowed down when COVID was peaking... identified need for further cross-training
10	New way of doing business: working remotely!	7.05%	(1) We are doing more WORK REMOTELY and virtually. (2) REMOTE WORKING implemented where feasible. Visitors not allowed on site. (3) We have had to adjust schedules and allow WORKING REMOTELY to keep safe distances within the building.

Source: Author (s)' analysis from 2021 Wage and Benefits Survey

Key Topics about the Impact on Overall Business Practices. Table 6 shows the key topics and the associated keywords that emerged throughout the text responses regarding the impact of COVID-19 on the general business practices of manufacturing companies. This analysis is similar to the cluster analysis presented in Table 5 but gives additional details on the keywords used to describe the impact of COVID-19 on general business practices. Social

distancing and wearing masks, the employees working together, and logistics impact business issues, and meetings appear across the responses.

Table 6. The Impact of Covid-19 on Overall Business Practices: Key Topics

TOPIC	KEYWORDS	COHEREN	FRE	CASE	%
EMPLOYEES WORKING TOGETHER AND LOGISTICS COORDINATED LUNCH AND BREAK TIMES	COORDINATED; PROXIMITY; LOGISTICS; LUNCH; BREAK; TIMES; WORKING; EMPLOYEES; COORDINATED LUNCH AND BREAK TIMES; EMPLOYEES WORKING TOGETHER AND LOGISTICS; WORKING FROM HOME;	0.651	78	31	10.03%
ALLOWED ESSENTIAL	ALLOWED; ESSENTIAL; SHUT; BUILDING; VISITORS; FACILITY; REDUCED; MONTHS; PEOPLE; PERSON; TEMPERATURE; HOURS; OPEN; WORKING; BREAK; AREAS;	0.486	27	15	4.85%
TEMPERATURE CHECKS	FACE; CHECKS; TEMP; MASK; TESTING; POLICIES; TEMPERATURE; SITE; CUSTOMERS; TRAVEL; TEMPERATURE CHECKS;	0.464	21	15	4.85%
SOCIAL DISTANCING WEAR MASKS	SOCIAL; DISTANCING; MASKS; WEAR; DISTANCE; WEARING; TEMP; PROTOCOLS; MASK; SOCIAL DISTANCING; WEAR MASKS;	0.441	69	49	15.86%
CLEANING PLANT	CLEANING; PLANT; PPE; OFFICES; HEALTH; SUPPLIES; MEETING; VISITORS; INCREASED; LIMITED; TRAINING;	0.437	31	19	6.15%
FULL MONTHS	FULL; MONTHS; HOURS; ADDITIONAL; MAKING; TIME; YEAR; WORK; PART;	0.408	15	9	2.91%
SLOWED DELAYED	SLOWED; DELAYED; VISITS; CUSTOMER; CLOSED; PRODUCTION; REDUCED; SCHEDULE; INCREASED; SITE; FACILITY; MEETINGS;	0.405	13	10	3.24%
MEETINGS VIRTUAL	MEETINGS; VIRTUAL; PERSON; WORK; HOME; CONDUCT; REMOTE; SAFE;	0.378	28	22	7.12%
IMPACTED BUSINESS	IMPACTED; BUSINESS; LA YOFFS; COVID; PART; YEAR; WORKFORCE; INCREASE;	0.376	28	23	7.44%

Source: Author (s)' analysis from 2021 Wage and Benefits Survey

Key Phrases Used to Describe the Impact of COVID-19 on Overall Business Practices.

In this section, we also extracted the key phrases respondents use to describe the impact of COVID-19 on overall business practices. Table 7 tabulates 16 key phrases seen across 241 responses. These key phrases appear at least three times across all responses. The key phrases are social distancing, work from home, remote work, coordinated lunch and break times, the employees working together, and logistics.

Table 7. The Impact of Covid-19 on Overall Business Practices: Key Phrases				
	FREQUENCY	NO. CASES	% CASES	TF • IDF
SOCIAL DISTANCING	21	20	6.47%	29.5
WORK FROM HOME	11	11	3.56%	19.3
REMOTE WORK	8	8	2.58%	15.2
COORDINATED LUNCH AND BREAK TIMES	6	6	1.94%	10.3
EMPLOYEES WORKING TOGETHER AND LOGISTICS	6	6	1.94%	10.3
TEMPERATURE CHECKS	5	5	1.62%	9.0
WEAR MASKS	5	5	1.62%	9.0
BUSINESS PRACTICES	3	3	0.97%	6.0
CDC GUIDELINES	3	3	0.97%	6.0
COMMON AREAS	3	3	0.97%	6.0
COVID HAS IMPACTED	3	3	0.97%	6.0
COVID PROTOCOLS	3	3	0.97%	6.0
HAND SANITIZER	3	3	0.97%	6.0
INCREASED ABSENTEEISM	3	3	0.97%	6.0
PERSON MEETINGS	3	3	0.97%	6.0
VIRTUAL MEETINGS	3	3	0.97%	6.0
Source: Author (s)' analysis from 2021 Wage and Benefits Survey				

IMPLICATIONS AND CONCLUSION

Literature review and survey results suggest that the manufacturing landscape has changed tremendously because of COVID-19. This has important implications for, primarily, human resource managers. First, awareness of the changes in a business environment is essential for managers. They must know the actual and potential changes associated with the Covid-19 pandemic.

Second, the survey results suggest that managers should adapt to new business as usual involving remote work, increasing workplace issues, safety, and flexibility. Employee-related challenges require managers to be at the forefront of new policies and measures to protect facility operations and employees.

Third, managers should be keenly aware of product delays and customer relations because of the COVID-19-related disruptions. This issue is also closely related to workplace safety and disruptions due to workforce shortages. In the face of economic uncertainty and global supply chain disruptions, managers should look for innovative solutions to the ongoing disruptions to ensure their companies keep their operations.

Finally, employee-related challenges closely affect any company's future. Significant disruptions in this area require creative solutions. With the pandemic, mental health issues have been on the rise. Managers should accommodate a wide range of employee-related problems.

In sum, although COVID-19's impact on the training needs of manufacturing companies is less pronounced by the survey responses, its overall impact on business practices is incredibly

significant as more than 90 percent of the respondents indicated that COVID-19 had an impact on their business practices. Many of these impacts are negative regarding increasing business costs, workforce-related challenges, and production delays. However, as suggested by some businesses, the overall impact was positive as their revenues and business activities increased.

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