The impact of COVID-19 on Business Recovery

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Abstract - Covid-19 has had an adverse impact on business organizations worldwide that were forced to undergo workplace transformation to prevent their activities from halting completely. Remote and flexible working had been incorporated into many organizations and played a vital role in their business recovery. Currently, normal everyday activities have been revived and businesses are back on track.

The purpose of this study was to analyse the internal and external factors that have impacted business recovery and the role that workplace transformation played in this process. Therefore, a questionnaire survey was conducted to determine the extent of problems faced by the selected business, factors that influenced its path to recovery, and the extent to which the organization has recovered. This report has been prepared to summarize and analyse these findings, and to draw conclusions regarding the research question. It also sheds light on the role of technology and workplace transformation regarding business recovery.

Keywords: COVID-19, Workplace transformation, Business Recovery

I. Introduction

The unprecedented emergence of Covid-19 adversely affected all aspects of life – economic, health, political and social. Imposition of partial and complete lockdowns in several countries across the world halted business activity, and the accompanying job losses aggravated the decline in demand. Most businesses irrespective of their size and industrial sector experienced declining sales, higher costs, supply chain disruptions and liquidity crisis in midst of the uncertainty created by the pandemic (1).

In response to this situation, businesses underwent a process of workplace transformation to tackle the hindrances and set back on the path to recovery. The term "workplace transformation" refers to redesigning workspaces like offices or factories by incorporating flexibility, innovation, and technology (2). Remote working from home, social distancing at the workplace and attending meetings online became the norm during and, in many cases even after the pandemic.

Several internal and external factors have affected business recovery including workplace transformation itself, incorporation of technology, labour productivity and turnover, access to better raw materials than competitors, and contingency planning as part of the internal factors, and government support, economic obstacles like inflation, and removal of import restrictions under the category of external factors.

The aims and objectives of this project include:

1. To determine the internal factors affecting the extent (degree and speed) of business recovery.
2. To determine the external factors impacting business recovery.
3. To analyse the impact of workplace transformation on business recovery.

While there tends to be significant literature present regarding the impact of Covid-19 on business organizations and economies around the world, most of the studies conducted feature organizations in the tourism and hospitality industry, there are apparently fewer research conducted focusing on the manufacturing and retail sector and the number is even smaller when restricted to Pakistan.

As a developing country and one with economic and political instability, businesses in Pakistan had been severely affected by the outbreak of the pandemic but many of them have recovered successfully. Apart from being an interesting topic to investigate, the availability of vast literature about the recovery strategies employed by these firms and the internal and external influences on the recovery process is crucial to provide a basis for contingency planning for the future outbreak of a pandemic, since existing plans mostly deal with hazards like floods, fire, and theft.

II. Literature Review

The massive impact of Covid-19 on business operations has stimulated researchers across the world to study how business organizations of varied sizes have responded to cope with the pandemic. Their research encompasses strategies adopted by respective organizations for nosiness recovery, incorporation of workplace transformation and factors that have influenced this journey. Some of such studies have been reviewed as part of the research project undertaken.

Factors affecting business recovery.

One of the industries that were most severely affected by the pandemic was the tourism and hospitality industry (3) and as such several studies have been conducted focusing on disaster management in this specific sector. Yeh conducted their study through interviewing journalists and experts in the field of tourism, to whom programs related to the impact of the pandemic were shown prior to the interviews. The basic aim of the research was to understand how the tourism industry was affected by Covid-19 and what tourism crisis and disaster management (TCDM) measures could be adopted for business recovery in Taiwan's tourism industry (4).

Research findings by Yeh, 2021 have been grouped into broad categories: various impacts of Covid-19 on the tourism sector, and effective TCDM, the former encompasses international disputes creating trade and supply chain disruptions resulting in scarcity of resources and hence higher prices; economic downturn causing businesses to shut down and job losses for many; and finally social distancing and travel bans leading to declining demand and a drop in tourism activity. For the latter part focusing on effective TCDM, the study indicates a lack of perfect solution but suggests temperance (moderation in recovery process); task prioritization including safety; physical and business recovery; and transparency of information as the key to effective TCDM (4). The most significant contribution of this study to the research undertaken is the way in which it has categorized the impact of Covid-19 on business organizations. It has enabled the identification of trade obstacles and supply chain disruptions as a major hindrance that can be applied to service and manufacturing business alike. It has also provided a basis for the identification and development of business recovery strategies and crisis management.

Li conducted data-based research by analysing 153 textural sources including articles published by government websites and hospitality firms of China. Key information was derived from these sources regarding the resilience strategies adopted by

Chinese restaurants and summarized and categorized into themes and subtopics. Findings of this secondary research enabled Li to develop an innovative crisis management model that classifies the restaurants' actions into two broad categories of emergency response and recovery response that have been subdivided according to internal and external performance. Emergency response includes prevention and control of the pandemic such as proper sanitization of facilities, government support, corporate social responsibility, marketing, and management response including contactless deliveries and cost savings, respectively. Whereas recovery response includes Covid-19 prevention, innovation in the areas of customer service, products and marketing strategy, and collaboration with parties like retailers, suppliers, and banks (5). Li's study has offered undeniably significant contribution to this research project as it enabled the identification of government support and collaboration with intermediaries especially suppliers as important variables impacting business resilience and recovery. Moreover, the innovative crisis management model sums up the strategies that any business could have adopted in wake of the pandemic thus suggesting some major turnaround and retrenchment strategies for this research model.

Spain being a tourism-oriented country was one of the most severely affected economies in the world following the outbreak of pandemic, therefore Rodriguez-Anton based their study on its hospitality sector. Secondary research was conducted by reviewing literature on the impact of the pandemic and recovery strategies adopted by the hospitality industry. The findings of the research present various strategies adopted by five major Spanish hotels to survive and combat amidst the pandemic outbreak. The most basic strategy adopted by them was to provide safe and hygienic conditions for their employees and customers. Others include emphasizing digitalization, innovative marketing and promotional packages, provision of additional facilities, and maintaining customer relations and trust in the organization (6). A crucial point highlighted by Rodriguez-Anton is the development of initiatives at the international, national, and organizational level to bring businesses and people out of an economic crisis. These include financial aid like loans, support for employed and self-employed people, subsidies, and tax incentives.

III. Methodology

To identify the factors impacting business recovery and recovery strategies adopted by organizations, primary research was conducted at the selected organization. A questionnaire comprising twenty-four questions was designed for this purpose. The organization was visited and after getting permission from the management the questionnaire survey was conducted from a sample of fifty employees selected based on random probability sampling. Before each employee began the survey, their consent was requested using a consent form attached with the questionnaire ensuring them that the information submitted would be anonymous and will be used for research purposes only.

The data collected was recorded and analysed in MS Excel. Pivot tables and charts were prepared for categorical variables like age, gender, and designation; descriptive statistics calculated for qualitative variables, and correlation and regression performed for the research's independent variables.

This study is a combination of quantitative and qualitative data collected using primary research, is based on a linear model, using ordinary least square method (OLS) for performing regression. In addition

to primary research, secondary research has played a vital role in this study especially as part of the literature review, as similar studies conducted in different industries and in various parts of the world have been analysed.

The basic framework for this research model is presented below, along with a key for the abbreviations used.
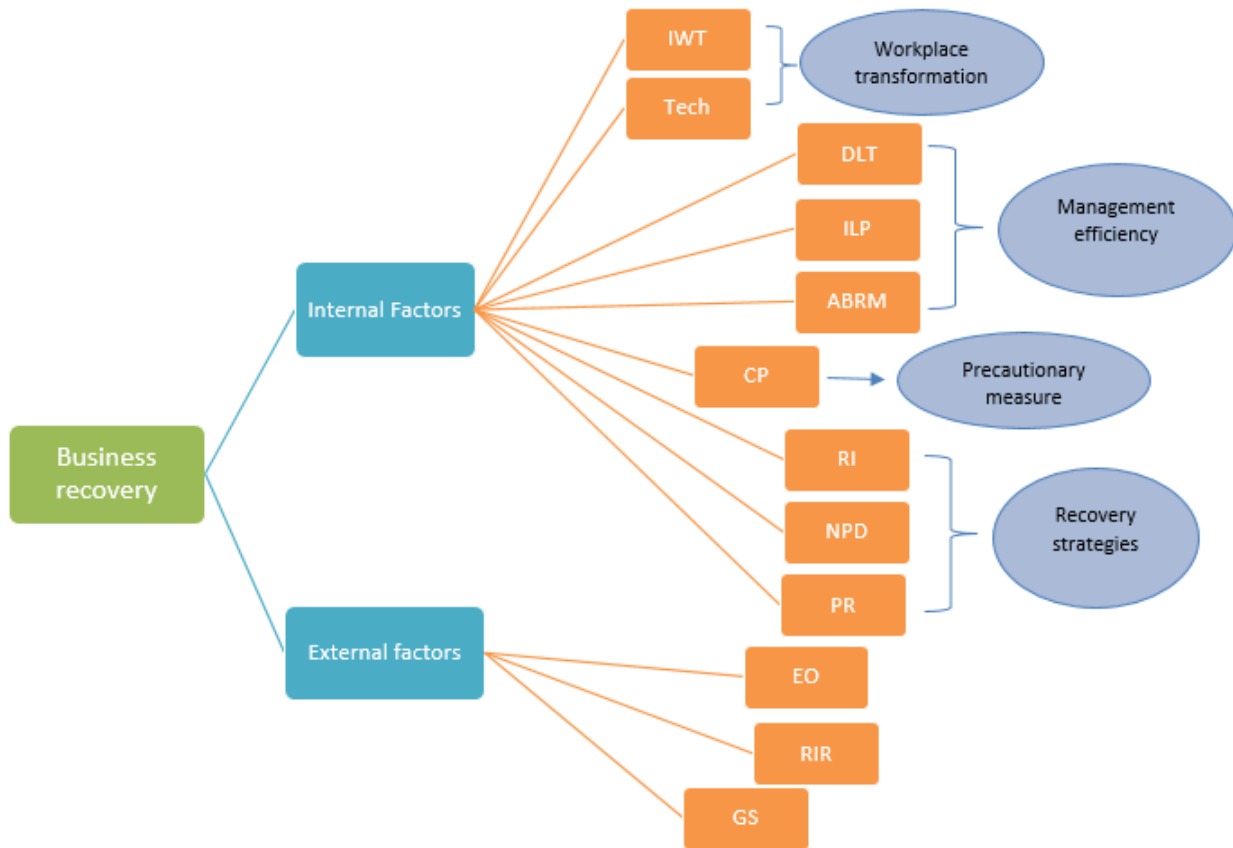

Figure 1: Conceptual framework

IWT	Integration of workplace transformation	RI	Reducing inventory
Tech	Use of Technology	NPD	New product development
DLT	Decline in labour turnover	PR	Price reforms
ILP	Increase in labour productivity	EO	Economic obstacles
ABRM	Access to better raw materials	RIR	Removal of import restriction
CP	Contingency planning	GS	Government support

Table 1: Key terms

Based on literature studied and articles reviewed, the conceptual framework shown in figure 1 had been developed for this research. It shows two branches of factors impacting business recovery: internal and external factors. Internal factors are those that are within the organization's approach and control, while external factors are those forces outside the business which are beyond its control.

Contingency planning involves businesses developing a plan or course of action to deal with future uncertainties and incidents like fire, theft, data loss and many more. An effective plan can enable businesses to minimize losses and recover in a shorter timespan (7). Although Covid-19 had been unprecedented and there were many uncertainties surrounding its spread and effects, many researchers have incorporated contingency planning as a preventive measure impacting business recovery and therefore has been included in this model.

Efficiency of human resource managers and operations managers is deemed important for executing any business strategies effectively. So, variables like increasing labour productivity, declining labour turnover, and access to better raw materials (in terms of quality and cost compared to competitors) have been incorporated.

Based on studies conducted (6)(8); the remaining three variables are concerned with retrenchment and turnaround strategies for business recovery. These focus on cost-cutting and boosting revenue, respectively. Therefore, reduction in inventory level has been included as part of retrenchment strategies and NPD and price reforms incorporated as part of turnaround recovery strategies.

As far as the external factors are concerned, government support in terms of tax reductions and provision of subsidies can support diminishing businesses or ones facing financial difficulties. In contrast, economic instability in the form of rising inflation and currency depreciation can worsen the situation for such businesses by for example, increasing the cost of domestic and imported raw materials and equipment (9). Hence, government support, removal of import restrictions and economic obstacles are the external factors that are part of this model.

IV. Results and Discussion

Data collected through primary research has been classified into categorical variables, qualitative variables, and internal and external factors (independent variables) that are affecting business recovery (dependent variable). The data has been summarized in the form of pie charts, pivot tables and descriptive stats, correlation of independent variables calculated, and regression performed for dependent and independent variables. This section attempts to analyse these data results.
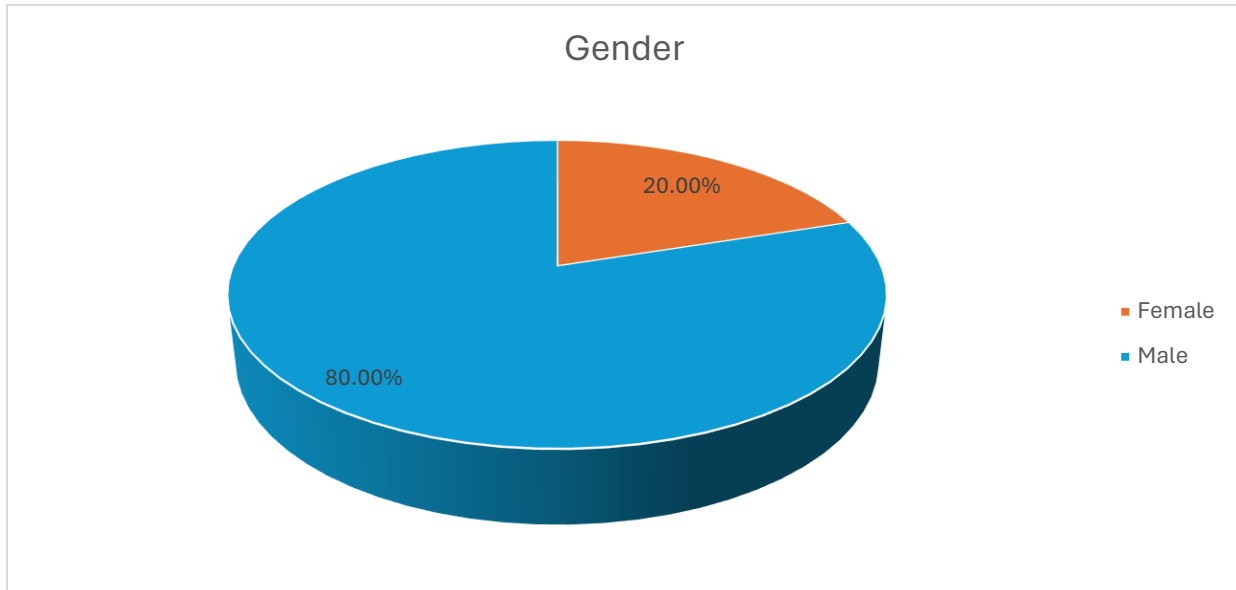
Categorical variables

Figure 2: Gender

The first question was regarding the gender of the respondents with 80% male responses and 20% responding females.

There was no response for "prefer not to say". The results indicate male dominance in the organization.
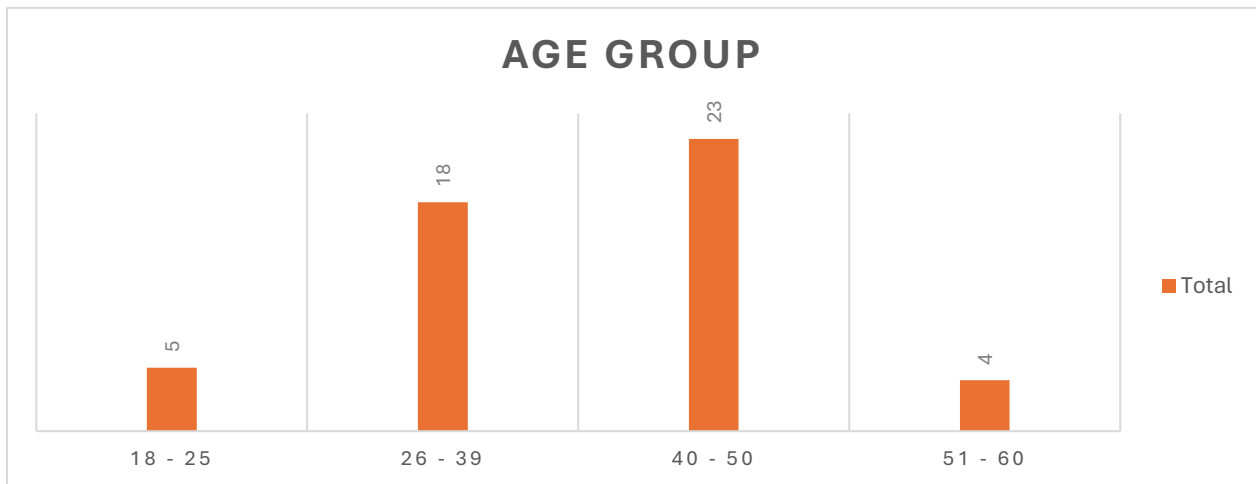

Figure 3: Age group

Concerning the age group of the respondents, most of them (46%) are between 40 and 50 years old, and the second highest range being between 26 and 39 years (36%).

People in these age groups are more experienced, productive, and adaptive to change. Very few people – 18% are either under 26 years or above 50 years of age.

Designation

Row Labels	Count of Designation
Executive	24.00%
Labourer	14.00%
Managerial	62.00%
Grand Total	100.00%

Figure 4: Designation

More than three-fifths of the respondents were in managerial positions in different departments of the organization, followed by executive positions accounting for 24% of the responses collected. This is a positive sign since people at senior positions are likely to have a better view and understanding of the internal and external affairs of the organization – including employees' performance, relations with suppliers and customers, and the external economic conditions. Also, they are the ones responsible for devising recovery strategies and measuring organizational performance. Thus, data collected from them is likely to be more accurate than from those at lower levels of the business.
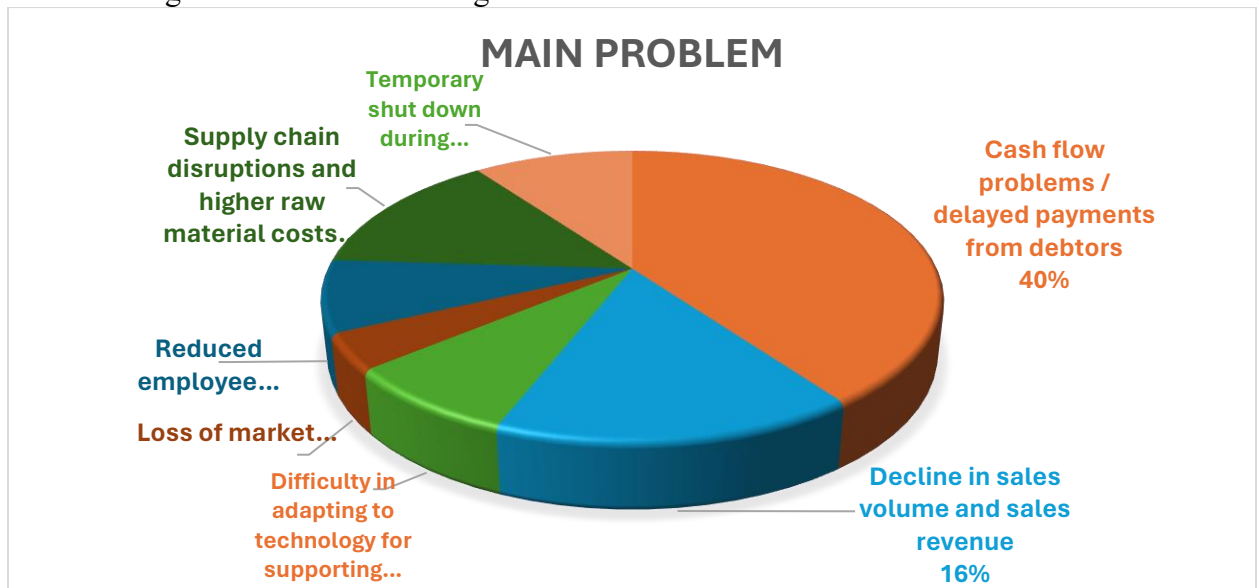

Figure 5: Main problem

Based on the studies reviewed as part of the literature review, some common problems faced by businesses following the pandemic were identified and the participants asked which problem was the most difficult to deal with. Cash flow problems or delayed payments from debtors seem to be the most problematic with 40% of respondents choosing this option. Similarly, a study conducted by Katare reveals cash flow as a variable affecting business recovery and suggests that businesses facing cash flow problems experience a longer time to recover (10). Decline in sales volume and revenue was the second most chosen option.

Only 4% of respondents chose loss of market share as the most significant problem. This can be an indicator that while the

business lost sales significantly, the other organizations in the industry were experiencing the same problem, and therefore the extent of market share lost may have been lower than some competitors slightly

reducing the seriousness of the problem. However, it indicates that loss of market share was a problem of less concern than cash flow disruptions.

Correlation

	IWT	Tech	DLT	ILP	ABRM	CP	RI	NPD	PR	EO	RIR	GS
WT												
ech	.67											
LT	.61	.46										
LP	.49	.4	.35									
BRM	.42	.44	.28	.42								
P	.47	.33	.39	.36	.132							
I	.27	.1	0.07	.1	.402	0.12						
PD	.58	.37	.47	.42	.062	.45	0.06					
R	.66	.67	.52	.48	.338	.55	0.03	.63				
O	0.52	0.16	0.32	0.21	0.27	0.31	0.2	0.29	0.26			
IR	.52	.66	.53	.45	.34	.38	.07	.45	.61	0.1		
S	.53	.51	.52	.48	.363	.51	.04	.43	.61	0.13	.58	

Table 3: Correlation Matrix

Correlation measures the relation or dependence between two variables and helps assess whether independent variables are truly independent. In this model, the above table shows the correlation calculations. All values between variables are below 70%. This indicates weak correlation for results under 30% and a moderate dependence for results between 30% and 60%. No strong correlation (>70%) exists. Thus, there is no multicollinearity (11).

Regression on internal and external factors affecting recovery has been performed separately. As such both models will be discussed one by one.

Internal factors impacting recovery.

Goodness of fit

R Square is a measure of how well the regressors (independent variables) explain the regressand (dependent variable) in a regression model (12). In this model, the R Square is 87% which indicates that 87% of

Regression

the model is explained that means only 13% of the model is unexplained.

Regression Statistics

Multiple R	0.930597328
R Square	0.866011386
Adjusted R Square	0.835863948
Standard Error	0.382249373
Observations	50

	Coefficients	Standard Error	t Stat	P-value
Intercept	1.63	0.65	2.52	0.02
IWT	0.23	0.09	2.71	0.01
Tech	0.24	0.08	3.18	0.00
DLT	-0.07	0.07	-0.96	0.34
ILP	0.12	0.07	1.58	0.12
ABRM	0.08	0.08	0.94	0.35
CP	0.21	0.06	3.59	0.00
RI	-0.08	0.06	-1.37	0.18
NPD	-0.01	0.06	-0.23	0.82
PR	0.22	0.09	2.39	0.02

Table 4: Regression - Internal factors

Interpretation of coefficients and P-values

IWT has a positive coefficient of 23% which means that a 1% increase in integration of workplace transformation (IWT) will lead to a 23% increase in EoR (extent of recovery). Similarly, Tech has a 24% coefficient implying that a 1% increase in Tech leads to a 24% rise in EoR. Both these variables have P-values of less than 5% with the results being 1.0% and 0.3% respectively which means they are significant (Di, 2020). Similarly, two other variables are significant with P-values less than 5%, namely CP and PR (0.1% and 2.2%). They also have positive coefficients of 21% and 22% respectively. This indicates that a 1% increase in CP will lead to a 21% rise in EoR and a 1% increase in PR will result in a 22% increase in EoR and vice versa.

ILP has a positive coefficient of 12% which means that a 1% increase in ILP will cause a 12% increase in EoR. However, it has a p-value of 12.2%, which is higher than the 5% benchmark thus rendering this variable insignificant. Similarly, ABRM has a positive coefficient of 8% but the high p-value of 35.1% hinders its significance.

DLT has a coefficient of -7%. This indicates a negative relationship, so a 1% rise in DLT will lead to a 7% decline in EoR. However, this variable is insignificant with a P-value of 34.2%. Similarly, two other variables – RI and NPD show negative coefficients of -8% and -1% indicating an adverse relation with EoR, but they also have P-values higher than 5%, thus not being significant.

Joint significance

Ho = No regressor has a significant impact on the extent of recovery.

H1 = At least one regressor has a significant impact on the extent of recovery.

To evaluate whether at least one independent variable (out of the internal factors) has a significant impact on the extent of recovery (EoR) being the dependent variable, ANOVA (analysis of variance) has

been used. If F-calc is less than the value of F obtained in the ANOVA table, null hypothesis is to be rejected (13). In this model, F-calc is about 2.077 which is lower than the F value of 28.726. As a result, the null hypothesis is rejected, and the alternative hypothesis is not rejected. This proves that at least one of the independent variables or regressors has a significant impact on the extent of recovery.

External factors impacting recovery.

Regression Statistics

Multiple R	0.79
R Square	0.63
Adjusted R Square	0.61
Standard Error	0.58
Observations	50

	Coefficients	Standard Error	t Stat	P-value
Intercept	5.28	1.02	5.15	0.00
EO	-0.24	0.10	-2.50	0.02
RIR	0.46	0.10	4.58	0.00
GS	0.25	0.08	2.97	0.00

Table 5: Regression - External factors

Goodness of fit

R Square in this model is 64% which indicates that 64% of this model is explained while 36% of this model is unexplained. The value of R Square is low because this model has only three independent variables.

Interpretation of coefficients and P-values

EO has a coefficient of -24%. This indicates a negative relation with the dependent variable. One percent increase in EO (economic obstacles) would lead to a 24% decline in EoR. This variable has a P-value of 1.6% which is less than the 5% benchmark, thus implying that it is significant (14).

RIR and GS have positive coefficients of 46% and 25% respectively.

This means that a 1% increase in RIR will lead to a 46% increase in EoR. Similarly, a 1% rise in GS, would cause EoR to increase by 25%. Both these variables are significant as their P-values are 0.0% and 0.5% respectively and thus are lower than 5%.

All variables in this model are significant.

Joint significance

Ho = No regressor has a significant impact on the extent of recovery.

H1 = At least one regressor has a significant impact on extent of recovery.

ANOVA has been used to assess whether this model of external factors impacting recovery has at least one regressor or independent variable with a significant impact on the extent of recovery. F-calc is

2.79 which is less than the F value of 26.73. This implies that the null hypothesis has been rejected and the alternative hypothesis has not been rejected (Silviu, 2014). So, there is at least one independent variable in this model that has a significant impact on the extent of business recovery.

V. Conclusion

Based on data analysis conducted, the initial null hypothesis has been rejected while the alternative hypothesis has not been rejected. This means that internal and external factors have a significant impact on business recovery.

It is important to highlight the significance of workplace transformation and technology in the process of business recovery. This has been emphasized by several articles and models studied, and the data analysis in this model also reflect their importance in business recovery through positive coefficients and P-values below 5%. While there has been a lack of a perfect contingency plan for a pandemic situation like covid-19, many similar studies and the results of this research suggest that it has been useful. In fact, the situation for businesses may have been worse if there were no such plans at all. Economic factors and government support are some of the external factors, the impact of which have been studied by researchers across the world. These variables have also been classified as significant by this research's results.

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