

# A study on employees' perspective on the impact of COVID-19 on IT industry

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## ABSTRACT

The primary objective of this report is to study and analyze the impact of COVID-19 on employees in IT industry. To analyze the impact, a total of eight factors are taken into consideration which may reflect the impact from employees' point of view. The factors are Organization at work, Social interaction, Employee engagement, Work load, Time management, Flexibility at work, Productivity and Supply management were chosen and questionnaire is prepared in which data on employees' perspective before and during quarantine is collected. Also questions are framed in pairs under each factors in which the productivity holds five pair of questions such as productivity, production output, net income, managing customer and service and manpower and technology which forms a total of 12 pairs. This report also discuss on some of the problems faced by employees' during quarantine and problems they face. WFH (work from home) is the only way to work since it reduces the social interaction among people. But employees' find it difficult to adapt to this new work place and manage their work accordingly. They have to manage their office work at the same time their personal work in check. This report concludes that productivity and production output highly depend on social interaction and employee engagement.

**Keywords:** COVID-19 impact on IT industry, eight variables (factors), WFH (work from home)

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## 1. INTRODUCTION

COVID-19 is spreading human enduring around the world; that is the thing that we should all be concentrated on. In any case, we are not specialists. We are market analysts – and COVID19 is most unquestionably spreading monetary enduring around the world. The infection may in reality be as infectious monetarily as it is medicinally. The COVID-19 coronavirus episode has influenced populaces over the world. In a brief timeframe we were presented to a basic circumstance, confronted with various clinical, social and financial difficulties. The Information Technology & Information Technology Enabled Services (IT-ITeS) sector is a field which is undergoing rapid evolution and is changing the shape of Indian business standards. This sector includes software development, consultancies, software management, online services and business process outsourcing (BPO). The IT industry is heavily influenced by factors like the global market and sustenance of its rate of growth. The Covid-19 lockdown was a nightmare for India's nearly \$200 billion IT services industry, which was far from prepared to shift to a work-from-home model overnight. But now, even though the government has allowed firms in some areas to partially reopen offices, the sector is in no rush to return to the workplace.

When the Covid-19 pandemic came ashore and moves like lockdowns were being deliberated upon, the \$180-billion IT sector faced a huge challenge for business continuity. More than a month into it, industry executives feel it has been a blessing in disguise and will lead to a larger number of people to work from home in the post coronavirus world. They attribute the emerging scenario to cost and productivity gains out of WFH (Work From Home) and it is not just the IT sector which is reaping the benefits. Companies across the services sectors, including banks, are set to have fewer people work from the offices in the future. One of the more popular sayings of this pandemics has always been Work from Home. The self-explanatory terms have been a boon for various individuals that cannot afford to lose their monthly incomes, and to corporate behemoths that need their cogs in the country running as smooth as they can. Work from Home has gone from an if-you-are-sick scenario to an actual optional scenario,

given that its effectiveness has resulted in an emerging cost and productivity 16 gains – various sectors are now set to have fewer people work from offices following the economic resumption post-pandemic lockdown.

For analyzing the performance of the employees, the factors are selected based on the importance they play in an industry. The factors are carefully chosen for the analysis purposes. They are recorded in pair as before quarantine and during quarantine.

### **1.1 Organization t work**

Organization is a key segment of profitability. At the point when mess gathers, our consideration decreases and execution can endure thus. At the point when your cerebrum, time, workspace and undertakings are sorted out, it gets simpler to smooth out both your activities and contemplations. We investigated probably the best approaches to get sorted out, in each feeling of the word, with the goal that efficiency will fall into place easily. In order to maintain an efficient and smart way to organize work one must make sure to utilize the ways in which the work has to be done.

### **1.2 Social Interaction**

Work connections are unimaginably imperative to worker prosperity. It's about more than simply "coexisting" with an associate. As people, we pine for contact and association with others. Full-time workers invest a lion's share of their energy at the workplace. Which is the reason work connections are so critical to worker prosperity. These connections can either emphatically or contrarily influence a representative's feelings of anxiety, efficiency and general sentiments of joy. These variables influence a worker's work execution, yet it influences representative wellbeing as well. Social clinicians have been examining the human need of having a place for a long time. It's been discovered that feeling a feeling of having a place is a significant characteristic helper.

### **1.3 Employee Engagement**

The term employee engagement identifies with the degree of a worker's responsibility and association with an association. Worker commitment has developed as a basic driver of business accomplishment in the present serious commercial center. Elevated levels of commitment advance maintenance of ability, encourage client dedication and improve authoritative execution and partner esteem. Representative commitment is rapidly getting one of the most significant pointers in checking work fulfillment. Workers today are searching for something beyond a 9-to-5 occupation. They need to be engaged with their work, excited about the association they work for and focused on their kindred specialists.

### **1.4 Work Load**

In the cutting edge working environment, an elevated level of efficiency is the thing that administrators anticipate from their representatives. The bar is set high since they need to work in an on-request society. Organizations are compelled to stay up with the requests of their clients since rivalry is savage, and on the off chance that one business can't fulfill the craving of the requesting and frequently whimsical open, it won't endure. The best resource any business has is its workforce, and if representatives are exhausted and overpowered, they may think that it is hard to finish the entirety of their allocated undertakings.

### **1.5 Time Management**

Time the board is the way toward arranging and practicing cognizant control of the time spent on explicit exercises to work more brilliant than harder. It is a shuffling demonstration of different things that assist you with expanding productivity and strike a superior work-life balance. Improving your time the board at work permits you to upgrade your exhibition and accomplish your ideal objectives with not so much exertion but rather more compelling techniques.

### **1.6 Flexibility**

Flexibility in the working environment permits businesses and representatives to make plans about working conditions that suit them. This assists representatives with keeping up a work/life adjust and can assist managers with improving the profitability and productivity of their business. For whatever length of time that representatives are as yet getting their base qualifications, bosses and workers can arrange approaches to make their working environment more adaptable. Models incorporate changing what hours are worked and where work is performed.

### **1.7 Productivity**

Any compelling and fruitful business comprehends the significance of efficiency in the work environment. Being beneficial can support the firm increment and use the limit of the HR it has. Most beneficial organizations have cheerful and solid representatives, which are the premise of a fruitful association. As far as client benefits, Productivity in the work environment will frequently convert into great client assistance and cooperation. This all out customer experience is the way to fulfilling clients and customers, and practically all profoundly profitable organizations utilize this to pick up client dedication. At the point when a client is faithful to your business, they will impart their experience to other people, which is an advertising advantage coming out of elevated levels of efficiency. The representatives themselves are a speculation, and like any venture, they should yield a solid or advantageous come back to the organization. In this way, when workers are exceptionally profitable the organization accomplishes its objectives of putting resources into them in any case. Profitability additionally assists with inspiring the working environment culture and lift moral, delivering a shockingly better organization condition.

### **1.8 Supply management**

The way toward acquiring and overseeing of items or administrations expected to work a business or other sort of association. Components of gracefully the executives incorporate the real items, data, spending plans, and representatives. The reason for gracefully the executives systems is to keep costs stable and use assets adequately to expand the benefits and effectiveness of the business or association. Arranging - Plan and deal with all assets required to satisfy client need for an organization's item or administration. At the point when the flexibly chain is built up, decide measurements to quantify whether the gracefully chain is productive, compelling, conveys an incentive to clients and meets organization objectives.

Sourcing - Pick providers to give the merchandise and ventures expected to make the item. At that point, build up procedures to screen and oversee provider connections. Key procedures incorporate requesting, getting, overseeing stock and approving provider installments.

Assembling - Sort out the exercises required to acknowledge crude materials, fabricate the item, test for quality, bundle for transportation and timetable for conveyance.

Conveyance and Logistics - Organizing client orders, booking conveyance, dispatching loads, invoicing clients and accepting installments.

Returning - Make a system or procedure to reclaim deficient, abundance or undesirable items.

## **2. OBJECTIVE**

- To study the impact of covid-19 on employees in IT sector.
- To study the performance of employees before and during quarantine based on the factors that are chosen
- To study the challenges faced by the employees during quarantine and the measures that need to be taken to overcome the challenges

### 3. RESEARCH METHODOLOGY

A questionnaire has been designed by considering some factors related to employee's perspective. For rating the different features 1 to 5 continuous scale (strongly agree, agree, neutral, disagree and strongly disagree) has been used where each number corresponds to the scale respectively. Data is collected from around 120 employees from IT industry. Primary data is collected using Google forms and most employees from different IT companies. The number of years of experience, I which they are categorized into three groups accordingly. The rating is given based on a scale of 1 to 5 where strongly agree, agree, neutral, disagree and strongly disagree respectively.

Reliability test is also done and Cronbach's Alpha is 0.842 which indicates that the questionnaire is an acceptable level of reliability and the number of items is 26.

The statistical tools are Descriptive Statistics, T-test, Multiple regression test, Cross table and chi-square, Anova test and Spearman's correlation.

In the questionnaire, each of the factors consists of a pair of questions for both before and during quarantine a total of 12 pairs of questions in which one pair in each of the first six factors and eighth factor and 5 pairs of questions (productivity, production output, net income, managing customers and technology and man power) related to productivity factor.

### 4. ANALYSIS

#### 4.1 Descriptive statistics

**Table-1:** Descriptive statistics

S.No	Factors	Mean		SD	
		Before	During	Before	During
1	Organizing at work	2.28	1.97	0.8191	0.8284
2	Social interaction	1.87	1.88	0.6919	0.7361
3	Employees' engagement	2.05	2.21	0.8428	0.785
4	Work load	2.09	2.09	0.7458	0.9096
5	Time management	2.03	2.12	0.7215	0.9432
6	Flexibility	2.1	2.22	0.77269	0.832
7	Productivity	2.08	2.36	0.736	0.9269
8	Production Output	2.28	2.57	0.7173	0.9158
9	Net income	2.41	2.53	0.791	0.9909
10	Managing customer and service	2.22	2.33	0.7586	0.8524
11	Man power and technology	2.03	2.28	0.7452	0.8904
12	Utilization of resources	1.92	2.25	0.7478	0.8008

### Interpretation

The highest mean value 2.45 before quarantine for net income and the lowest mean value is 1.87 before quarantine for social interaction.

The highest mean value is 2.57 during quarantine for production output and the lowest mean value is 1.88 during quarantine for social interaction.

### 4.2 T-test

Ho: There is no significant difference between the mean performance of employees before quarantine and mean performance of employees during quarantine and are same

Ha: There is significant difference between the mean performance of employees before quarantine and mean performance of employees during quarantine and are different

Number of tail - Two tail

Level of significance - 0.05

**Table-2: Paired t-test**

S.No	Factors	P-value
1	Organizing at work (pair 1)	.004
2	Social interaction (pair 2)	.903
3	Employees' engagement (pair 3)	.095
4	Work load (pair 4)	.930
5	Time management (pair 5)	.375
6	Flexibility (pair 6)	.227
7	Productivity (pair 7)	.002
8	Production Output (pair 8)	.001
9	Net income (pair 9)	.203
10	Managing customer and service (pair 10)	.259
11	Man power and technology (pair 11)	.004
12	Utilization of resources (pair 12)	.000

### Interpretation

From these analysis, the significance value of the test is less than 0.05 for pair 1, 7, 8, 11 and 12 (organization, productivity, production output, technology and utilization of resources). So we accept the alternate hypothesis and reject the null hypothesis. There is a significant difference between the mean performance of employees before quarantine and mean performance of employees during quarantine and they are different.

Also the significance value of the test is greater than 0.05 for pair 2, 3, 4, 5, 6, 9 and 10 (social interaction, employee engagement, quantity of work, time management, flexibility, net income and managing customers and services). So we accept the null hypothesis and reject the alternate hypothesis. There is no significant difference between the mean performance of employees before quarantine and mean performance of employees during quarantine and they are same.

#### 4.3 Multiple Regression Test

Predictors – employee engagement, organization at work and utilization of resources; dependent variable – productivity

Ho: Employee engagement, Organization and utilization of resources are not a good predictor of productivity during quarantine and the model is not fit.

Ha: Employee engagement, Organization and utilization of resources are a good predictor of productivity during quarantine and the model is fit

Number of tail - Two tailed

Level of significance - 0.05

**Table-3:** Multiple regression test

Regression statistics	Multiple R	R Square	Adjusted R Square	Level of Significance
Employee engagement	0.266	0.071	0.063	0.004
Organization at work	0.347	0.12	0.105	0.001
Utilization of resources	0.399	0.159	0.136	0.000

#### Interpretation

The R square value is 0.71. So, that the productivity during quarantine has variation about 71% based on employee engagement, Organization and utilization of resources. Also the significance value of these parameters is 0.04. The value is less than 0.05. So, we accept the alternate hypothesis and reject the null employee engagement, Organization and utilization of resources are a good predictor of productivity during quarantine.

The difference between R square and adjusted R square is very low this indicates no new predictors can improve R square if included. The multiple R value is 0.266

The regression equation is in the format  $y = a + bx$ . Therefore, productivity is equal to 0.937(constant) + 0.211\*employee engagement + 0.219\*organization + 0.235\*utilization of resources. From the three independent variable, the productivity during quarantine is highly predicted by utilization of resources.

#### 4.4 Cross table and chi-square

Ho: There is no association between the factors (variables)

Ha: There is association between the factors (variables)

Number of tail - Two tailed

Level of significance - 0.05

The variables are

- Productivity during quarantine \* quantity of work during quarantine
- Productivity during quarantine \* utilization of resources during quarantine
- Production output during \* quantity of work during quarantine
- Production output during \* utilization of resources during quarantine

**Table-4:** Cross table and Chi-square

Variables	Pearson Chi- square	Level of significance
Productivity during quarantine * quantity of work during quarantine	43.266	0.000
Productivity during quarantine * utilization of resources during quarantine	51.033	0.000
Production output during * quantity of work during quarantine	51.772	0.000
Production output during * utilization of resources during quarantine	39.561	0.000

Interpretation

- There is association in productivity and quantity of work during quarantine
- There is association in productivity and utilization of resources during quarantine
- There is association in production output and utilization of quantity of work during quarantine
- There is association in production output and utilization of resources during quarantine

#### 4.5 Anova-testing homogeneity across groups

Years of employee work experience is categorized into

- employees' with one year experience
- two to three years of experience
- More than three years of experience.

Ho: There is homogeneity in organization, social interaction, employee engagement, quality of work, time management, flexibility, managing customers and manpower and technology (during quarantine) across the groups of work experience

Ha: There is no homogeneity in organization, social interaction, employee engagement, quality of work, time management, flexibility, managing customers and manpower and technology (during quarantine) across the groups of work experience

Number of tail - Two tailed

Level of significance - 0.05

**Table-5:** Anova-testing homogeneity across groups

S.No	Variables(factors)	Level of significance	F-value
1	Organizing at work	0.368	1.007
2	Social interaction	0.408	0.903
3	Employees' engagement	0.604	0.506
4	Work load	0.305	1.2
5	Time management	0.160	1.862
6	Flexibility	0.308	1.191
7	Managing customer and service	0.403	0.916
8	Utilization of resources	0.163	1.847

**Interpretation**

The level of significance is greater than 0.05 for all the variables and null hypothesis is accepted. Therefore, there is homogeneity in the variables across the groups of work experience.

**4.6 Spearman's correlation**

Ho: There is no relationship between the variables

Ha: There is a relationship between the variables

Number of tail - Two tailed

Level of significance - 0.01

The variables are

- Productivity and employee engagement during quarantine
- Productivity and employee engagement before quarantine

**Table-6:** Spearman's correlation

Variables	Correlation value	Level of significance
Relationship between productivity and employee engagement during quarantine (pair 1)	0.254	0.006
Relationship between productivity and employee engagement before quarantine (pair 2)	0.375	0.000



## Interpretation

The significance value of first pair is greater than 0.01 and null hypothesis is accepted. Therefore, there is no relationship between productivity and employee engagement during quarantine.

The significance value of second pair is less than 0.05 and alternate hypothesis is accepted. Therefore, there is relationship between productivity and employee engagement before quarantine.

Both the variables are moderately, positively correlated.

## 5. Conclusion

From the analysis it can be seen that of the eight factors employee engagement and social interaction have high impact on productivity and production output both before and after quarantine.

The organization at work, work load, time management and flexibility are not the same before quarantine. They show much variation during quarantine because of the lack of manpower and energy, technology and utilization of resources. Employees find it hard to work with much less things related to their work. They also find it difficult to manage their time as they have to keep up with their personal matters.

It can be concluded that the first six factors are dependent on each other that is one's influence has its effect on the others. The productivity is dependent on the other factors but it highly depends on the employee engagement towards the work and interaction among them to cooperate and understand each other especially in times of pandemic.

Analysis concludes that most of the employees consider WFH to be difficult and utilization of resources is low compared to that of before quarantine which makes the project works more challenging.

Even though many IT companies face difficulty to maintain a proper workforce and productivity some have made WFH to be permanent till the end of the year or more and they seem to be able to increase their productivity.

## 6. Suggestions

We are in a very different situation considering the work environment before quarantine, things are changing and employees are forced to work from home. Most of them have to adapt to their new work place and at the same time have to keep up with their personal matters in check.

Time management is very important considering the working hours before quarantine is completely different during quarantine. Employees find it hard to work late night when they are asked to. A proper time allotment should be given to maintain a stable working hours for the employees.

The quantity of work should also be considered and the interaction among the teams will be useful to plan their work and finish it in lesser time and efficiently.

Companies should come up with more ideas and methods to make their employees attach to their new work place. Most of the employees agree on new ways and programs should be made to make them more engaged to the work.

Several employees are being forced to work for the companies without being paid for three months or more which results in job withdrawals. They should consider the situation of employees during these times and pay cuts should be avoided.

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