

**Application of Robotic Process Automation in Unorganized Sector**

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**Abstract**

India's unorganized sector includes 93% of the total workforce, which covers half of the GDP. It includes all incorporated business enterprises owned by individuals engaged in the sale and manufacturing of goods and services and run through a proprietary or partnership basis with less than 10 workers. The purpose is to demonstrate a case study presenting the role of robotic process automation in the unorganized sector. Robotic Process Automation (RPA) is achieving grounds in global business areas. Thus, businesses are shifting towards digitalization; it plays a sophisticated role and ensures the users a smooth digital experience. A case study assists the research in providing empirical evidence and provides a more effective accounting system. The elaboration and in-depth analysis of this paper will provide some research foundation for robotic process automation implementation.

**Keywords:** Robotic Process Automation (RPA); Awareness; Unorganized Sector.

**1. Introduction**

In India, most outlets are in the category of the unorganized sector; they are not aware of technological advancement. Most of the outlets are unorganized; they do not have the proper knowledge and system to face challenges in their day-to-day life. If we talk about the unorganized sector, we can say” all kind of incorporated private sectors owned by individuals or householders, not incorporated by the govt. of India, involved in selling and manufacturing goods and services with less than 10 employees, comes under the definition of an unorganized sector. In business terms, this kind of sector is also called the informal sector, and there are no certain working hours, no specific remuneration, no job security, and no govt. control on them. Unorganized businesses in India are either family businesses or self-employed they do not have a proper system to handle the current situation of our economy. This sector covers half of counties G.D.P. According to” Ministry of Labour Employment (MOLE)” no centralized database is here

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of unorganized labour, for this govt. provides “Aadhar seeded unorganized workers identification number” to more than 40 crores workers in the unorganized sector. The informal sector is mostly a cash-based system; it contributes a significant portion to investments and saving. According to the survey, approximately 92.5% of the people who create about 2/3 of our G.D.P., are not yet registered. Entrepreneurs choose smart work instead of hard work in artificial intelligence to achieve high goals quickly. Artificial intelligence plays a sophisticated role in back-end Purpose. This study is to know the impact of robotic process automation on the unorganized sector. Adding automation to the unorganized system may lead to a higher level of satisfaction in workers. Robotic process automation (R.P.A.) is expanding arms in the global business workplace. As a result, there is a shifting of manual work to digital bots. Works through bots are already in use, and many sectors are using artificial intelligence to increase efficiency and reduce errors to expand their business. Through the rapid growth of artificial intelligence, many software industries are at their peak. A huge amount of I.T. jobs is to be expected in coming years.

The outcome of this research would be a model to promote awareness of using robotic process automation in an unorganized sector. There is a huge potential for robotic process automation in India, but workers are still not aware of technological changes; there is a need for necessary skills and training to adopt artificial intelligence in their day-to-day activity. In this study, we consider the unorganized sector’s transformation by adopting new changes in the form of Robotic process automation, that how automation can make their work easy and fast.

The main factors are as follows:

- 1. Occupy large area in Indian economy-** this is a very well-known fact that there is a vast existence of an unorganized sector in India with a majority of around 93% workforce, including self-employed workers and employees working under someone. According to a depth survey, a fact came out that the largest segment of unorganized sectors are covered by agriculture workers (52% of the aggregate workforce)
- 2. Unorganized sectors are extremely resolute in nature-** economy of developing nations is closely linked with the developed countries, where almost 60% of tasks, including all financial activities, are in the hands of unorganized sectors. It contributes a huge amount to national income to create a new way of employment in India.
- 3. Obstinance not due to industries or state’s subset-** percentage of the unorganized sector varies from one state to another; more than 50% and above 90% of sectors are covered in unorganized units. Organizations cannot survive without unorganized sectors as they are carrying a large portion of the economy.
- 4. Huge level of concentration on weaker production units in unorganized sectors-** higher level of output comes from the unorganized sectors, which came out in vast production of commodities. Promotion of local businesses can be done by increasing the participation of unorganized workers in enterprises.

### **Statement of problem**

There are many problems in unorganized sectors like poor data management, transparency, and data authenticity. Hence, the robotic process automation system has been selected for better analysis to provide better output.

### **2. literature review**

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**Dr. Ipseeta Satpathy (Sept. 2017)** on the living condition of workers in unorganized sectors. This paper shows a comparative analysis of their working condition at present. Through this paper, the information I gathered is that the professional level of education and skills is very low in automation. No proper knowledge has been provided to individuals for their betterment. Many things remain behind, like poverty lack of proper knowledge, which came out as a lack of growth and instability in the economy. **K.Karthika (April 2016)** reveals on the study of retailers' socio-economic culture in unorganized sectors, shows workers employment in unorganized sector with a little amount of remuneration, Retailers of unorganized sector feel that they can survive in future as compared to organized sector. There is a significant link between workers and their economic status. Still govt. must take some initiative in order to make these sectors financially stable and strong. **Sathpathy,Ipserobustay 2018)** focuses on understanding workers' present living conditions in unorganized sectors. As the automobile industry plays a significant role in economic development, there is a need for a basic level of awareness to accept the change in automation. **Rinaj P.K. (July 2014)** shows policies on workers of unorganized sectors to protect them from lagging and promote self-help groups to achieve high goals. Informal sectors are expanding rapidly in the Indian economy as they are the leading players of the economy, but workers are still using old production techniques. The manual efforts should be minimized by adopting artificial intelligence in their daily tasks. Govt. should also take necessary steps for the development of unorganized sectors. **Himangini sharma (Jan 2017)** observed the problems which workers in unorganized sectors are facing. This study's primary concern is to examine workers' problems while doing any task. For this, laws and rules are studied to give them a healthy environment. Manual labor needs updating from time to time so that they can work fast with the present situations. There is a lack of comfort in this paper, which needs to be provided in bots and technology. So that they can work firmly without any burden. **Tailor, R K and Kumar, Sunita (2020)** focuses on applying RPA in shopping malls in Rajasthan. The focus of this study was to minimize the waiting line by applying robotic process automation. With the help of the RPA, the authors suggested that the waiting line in payment and other services can be minimized, and customer satisfaction and brand image, and expansion can be increased.

### Research Gap

Based on the above literature, it has been observed that the application of robotic process automation in the unorganized sector has not yet been studied.

### Objectives

1. To study the Robotic process automation in unorganized sector.
2. To assess the application of Robotic process automation in unorganized sector.
3. To suggest an appropriate R.P.A. model in unorganized sector

### Hypothesis

H0- There is no significant association between awareness of robotic process automation and adoption of robotic process automation in the unorganized sector.

### Research methodology

**Universe** – customers of unorganized sector in India

**Sample design** – population of study is unknown so that sample was selected by using random sampling method.

**Sample size**– 300(approx.) samples are taken from respondents

**Source of data**- primary data has been collected directly from the respondents.

### 3. Results and Discussion

**Table:1 Chi-square (Goodness of Fit) Testing and Interpretations**

Variables	Chi-square	d.f.	Asymp. Sig.	Decision
Existence of Robotic process automation	285.233	4	0.00	<b>Rejected</b>
Set standards	222.923	4	0.00	<b>Rejected</b>
RPA Mechanism	292.030	5	0.00	<b>Rejected</b>
Poor Training	161.585	4	0.00	<b>Rejected</b>
Poor management system	98.980	3	0.00	<b>Rejected</b>
Change behaviour	301.585	4	0.00	<b>Rejected</b>
Minimum adoption	210.415	4	0.00	<b>Rejected</b>
Time frame	90.097	3	0.00	<b>Rejected</b>
Financial benefits	243.525	4	0.00	<b>Rejected</b>
Quality products	132.077	3	0.00	<b>Rejected</b>
Healthy competition	193.492	4	0.00	<b>Rejected</b>
Promotional Offers	189.645	4	0.00	<b>Rejected</b>
Barriers of promotions	226.736	4	0.00	<b>Rejected</b>
Untrained Employees	187.137	4	0.00	<b>Rejected</b>
Mandatory buying	190.726	3	0.00	<b>Rejected</b>
Performance incentives	177.104	4	0.00	<b>Rejected</b>
Diversity among staff	185.331	4	0.00	<b>Rejected</b>
Work pressure	181.552	4	0.00	<b>Rejected</b>
Conflicts among staff	206.936	4	0.00	<b>Rejected</b>
External reviewers	148.876	4	0.00	<b>Rejected</b>
Poor infrastructure	158.241	4	0.00	<b>Rejected</b>

**Source: Primary Data**

#### **Inference Drawn:**

It is clear from the above table that the null hypothesis is rejected as the assumed significance value (P-value) of all the factors of the study is less than 0.05(@ 5% level of significance), i.e., 0.0000, which indicate that there is a significant difference between awareness of robotic process automation and adoption of robotic process automation in the selected unorganized sector.

#### **Independent t Test**

An Independent t-Test has been performed to compare the opinion of selected respondents of the unorganized sector for implementing robotic process automation systems. Hypothesis testing using an Independent t-test has been carried out to compare the awareness of robotic process automation in the unorganized sector on the basis of given dimensions of the RPA system among users of the unorganized sector.

**Table:2 Group Statistics**

	Respondents	N	Mean	Std. Deviation	Std. Error Mean
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Stress	Unorganized Sector	300	7.93	1.45	.143
Awareness	Unorganized Sector	300	8.14	1.67	.145
Transparency	Unorganized Sector	300	8.92	2.22	.179

**Source: Primary Data**

### Inference

The above table shows the group statistics, which describes the mean difference, standard deviation difference, and the difference's standard error. Based on the above table, it can be concluded that there is a difference in the mean and standard deviation between robotic process automation and application of RPA system of selected unorganized sector.

**Table: 3 Independent Samples Test**

		Levene's Test for Equality of Variance s	t-test for Equality of Means						
			F	T	Df	Sig. (2-tailed )	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
									Lower
Stress	Equal variance s assumed	1.16	-1.55	298	.007	-.294	.187	-.663	.075
	Equal variance s not assumed		-1.55	281	.007	-.294	.187	-.663	.075
Awareness	Equal variance s assumed	.006	-2.73	298	.005	-.542	.185	-.921	-.164
	Equal variance s not assumed		-2.73	295	.005	-.542	.185	-.921	-.163
Transparenc y	Equal variance s assumed	4.09	.721	298	.071	.159	.220	-.275	.594
	Equal		.72	27	.071	.1593	.220	-.275	.594

	variances not assumed		1	6					
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**Source: Primary Data**

### Inference

An independent t-test was used to compare robotic process automation and the adoption of the unorganized robotic process automation system concerning selected parameters. The above table shows that the parameter of **stress and awareness** have a **sig. value 0.007 and 0.005**, which is less than P-value 0.05, which shows that the null hypothesis is rejected, means there is no significant difference between the awareness of robotic process automation and the adoption of the robotic process automation system in the selected unorganized sector. At the same time, the parameter **transparency** has a **sig. value 0.71**, which is more than 0.05, indicates that the null hypothesis is accepted, which means there is a significant difference between the robotic process automation and the RPA system's adoption in the selected unorganized sector.

### Conclusion

Therefore, it is concluded that the unorganized sector owners and users are facing stress and poor RPA adoption system due to poor awareness about the implementation of RPA in unorganized sectors. If the unorganized sector can adopt robotic process automation, then the data transparency and data analysis can be done efficiently, which would be very comfortable for the end-users and the unorganized sector owners. They may utilize various services in their operational activities to manage their business and boost their brands. The organized sector management must implement robotic process automation in their ordering system, payment system, feedback, and feedforward system to expand their business. For this purpose, they may get involved themselves and their employees for proper training about the RPA system.

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APPENDIX

**TABLE: 1**  
**Data of people working in unorganized sector**

<b>sectors</b>	<b>people working in unorganized sector (in millions)</b>
<b>mining Sector</b>	1.79
<b>manufacturing Sector</b>	52.49
<b>electricity Sector</b>	1.21
<b>educational sector</b>	48.92
<b>health sector</b>	6.31
<b>trade and hotel Sector</b>	50.17

Source: [www.mca.gov.in](http://www.mca.gov.in)