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IMPACT OF UNSKILLED WORKFORCE AND NEED OF SKILL DEVELOPMENT IN CONSTRUCTION SECTOR OF MAHARASHTRA

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Abstract:
The construction business is an important one that is also expanding, and in order for it to operate, it requires a large number of employees. Many workers in the construction business, both domestically and internationally, do not have the necessary education or experience for their jobs. As a consequence of the growth of these workers' capabilities, the people, communities, and economy of the country will go through significant changes. Even if the bulk of the labor force is positioned at the bottom of the pyramid, there is still a pressing need to emphasize the importance of skill development in the workplace as well as at the building level. Investigating several instructional strategies that might be used to teach these abilities to skilled but less educated construction workers. The purpose of this study is to investigate the effect that unskilled labor has on the rate of construction productivity in India. Also to investigate the effect that highly trained labor has on the rate of construction productivity in India. In order to discover the obstacles that must be overcome in order to recruit a workforce for skill development programs. To provide some suggestions for improving the way the expert and unskilled workers are coordinated on the construction site.
Keywords: State government, Skill India imitative, schemes, migrant workers, skill development, upskill india.

1. Introduction

The availability of talents in India is significantly impacted by the demographic shift, the major fundamental change in the Indian economy. An rise in the proportion of people who are working age (15–59) to the overall population is one factor contributing to the acceleration of economic growth. A growth in GDP may result from the high income and savings of the youthful working population, which is defined as the ratio of the working age population to the non-working population, or those aged between 15 and 60. However, it is thought that economies only get the demographic dividend once throughout their lifetime. The United Nations (UN) defines an ageing society as one where more than 10% of the population is above the age of 60. The demographic dividend in China will expire in 2015, but the demographic dividend in India will last until 2040. However, improving the skill levels of the working population (in both the agricultural and non-agricultural sectors) is essential if we are to fully benefit from the demographic dividend. At this point, it's crucial to consider the composition of the labor force in terms of the general education they have acquired, since this has a significant impact on an individual's productivity, employability, and revenue creation. Of the 431 million people who were employed in 2009–2010, It is estimate that almost 126 million

(or 29% of the labor force) were not even literate. A further 102 million people, or around 24% of the labor force, only have a primary or lower level of education. As a result, half of the working population lacks the level of ability necessary to undertake employment in organized or unorganized sectors from the perspective of educational compatibility. The remaining labor force is composed of individuals with higher education (17%), intermediate level education (17.6%), or secondary level education (12%). Although the Right to Education (RTE) Act of the Government of India is anticipated to alter the situation somewhat, its implementation may take some time as it only provides training for middle and secondary levels.

2. Related Work

Suman, Saurav & Kumari (2022) Skill India, the National Skill Development Mission, Pradhan Mantri Kasushal Vikas Yojana, Swaena Jyoti, and the Pradhan Mantri Kasushal Vikas Yojana are all examples of government-run initiatives designed to help India's rapidly expanding workforce meet the demands of an increasingly urbanized population. The primary goal of this article is to analyze how increasing one's skill set impacts the creation of new jobs. The Indian government's efforts to improve the country's workforce have historically been centralized and based on a hierarchical style of training [1].

Brucker Juricic, Belinda & Galić, Mario & Marenjak, Sasa (2021) This article analyzes recent studies on labor market skill and labor shortages with a focus on the construction sector in EU Member States in preparation of the Construction 4.0 future. Every EU citizen has the right to unrestricted movement across the union, including the freedom to look for work anywhere they like. As a consequence of the EU's aging workforce and declining population, future labor shortages are projected [2].

Sinan, Mazen & Bubshait, Abdulaziz (2021) While the construction industry contributes for around 5.5% of GDP and 26.4% of private sector employment in Saudi Arabia in 2019, just 12.5% of construction employees are Saudi nationals. Saudi Arabians should expect an unemployment rate of 15.4% in 2020. At the same time, around 6.7 million of the private sector's Saudi workforce is made up of foreigners. This study looks at the pros and downsides of hiring locally in the building business [3].

Gaurav, Jayant (2020) This article is an academic study that investigates the scarcity of civil engineers with adequate qualifications currently employed in India. The fundamental objective of this book is to point teachers of civil engineering and their students in the direction of the skill sets that are required by the industry. The second purpose for which this book was written is to serve as an introduction to the field of civil engineering for graduates who are just entering the workforce in the building and construction business [4].

Johari, Sparsh & Jha, Kumar (2019) The goal of this research is to examine the barriers that prevent construction employees from participating in training programs that would

improve their skills. The study used a bottom-up methodology of unstructured interviews with construction workers and a top-down methodology of guided group brainstorming with the assistance of experts in the field (top-down approach). Findings Five barriers that prevent construction employees from attending training were found via the unstructured interviews [5].

Johari, Sparsh & Jha, Kumar (2018) High productivity and quality in construction work is difficult to achieve without a steady stream of experienced labor. Off-the-job training (OFJT) centers play a significant role in supplying emerging economies with trained labor. Lack of on-the-job experience during training is another reason why OFJT fails to create acceptable skills in employees despite significant time, money, and effort inputs. Therefore, the notion of recognition of previous learning (RPL) is integrated into the worker screening process to create an on-the-job training (OJT) system that is able to circumvent the constraints of the OFJT facility [6].

Selvam, T. (2017) The construction industry in India is responsible for the employment of more people than any other unorganized sector of the economy. The building and construction industry is a major economic driver worldwide. Building is required for almost all development efforts and programs in the fields of healthcare, education, food production, industry, and transportation. The present study provides light on the health challenges, mental health issues, financial difficulties, educational difficulties, working circumstances, habits, and safety and welfare regulations that are faced by construction workers. The results of this research will be beneficial to persons working in the disciplines of social work, public service, government, non-governmental organizations (NGOs), and policymaking [7].

Ramana, K.R. & Nallathiga, Ramakrishna & Pramadha, V. (2016) The building sector in India has been expanding recently, and this has helped the country's economy. After agriculture, it is the second largest employment in the country. This industry needs workers because of its interconnectedness with other parts of the economy. The lack of a readily available skilled labor force is a significant issue slowing development. The purpose of this article is to evaluate the effectiveness of NAC's training programs. It consequently gives insights into total growth done by each learner after getting instruction and also assess training effectiveness [8].

3. Research Methodology

3.1 Study Area for the Survey:

Every country or region's population may be a resource depending on its quality and other factors. The two main kinds of human resources are qualitative populations and numerical populations. Maharashtra is the third-largest state in India by area. Maharashtra is divided into 36 districts, 355 talukas, and 6 administrative regions. The state's major rivers include Krishna, Bhima, Godavari, TapiPurna, and Wardha-Wainganga. Since the state's central regions get little

rain, the bulk of the rivers in the region have several dams. In Maharashtra, there are around 1821 important large dams. Maharashtra is divided into five geographical regions. The western coastal region known as Konkan is located between the Western Ghats and the ocean.

3.2 Hypothesis of the Study

Hypothesis of the study are described below:

H01: There is no significant difference between the responses of client and contractor with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

Ha1: There is significant difference between the responses of client and contractor with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

H02: There is no significant difference between the responses of client and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

Ha2: There is significant difference between the responses of client and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

H03: There is no significant difference between the responses of contractor and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

Ha3: There is significant difference between the responses of contractor and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

H04: Skill development is not significantly required in construction sector of Ahmednagar and Pune.

Ha4: Skill development is significantly required in construction sector of Ahmednagar and Pune.

3.3 Research Design

The factors under consideration will be analyzed and compared using a straightforward descriptive survey approach. To gather and evaluate the pertinent data, both qualitative and quantitative processing of the data will be done. This study's research design is a descriptive survey, and a mixed-methods approach will be utilized to handle the data in both qualitative and quantitative ways. The researcher makes an effort to explain strategic management and the impact of both skilled and unskilled workers in the construction industry. The research will use a random sampling strategy. The respondents for primary data collection using the questionnaire approach will be the staff and the workforce. Both survey procedures and a combination of methods will be used to perform this study.

The exact steps or methods used to locate, choose, process, and analyze data pertaining to a subject are known as research methodology. The availability of qualified skilled laborers in sufficient numbers or with the necessary qualifications causes skilled labor shortages on a project. When administering the questionnaire for this research, convenience sampling was employed. The decision was made to use a questionnaire as the research instrument after taking into account the huge number of possible respondents in the sample size and the data needed to meet the study goals. The Statistical Package for Social Sciences (SPSS, version 26.0) was used to analyze the data collected from the questionnaires since the present study is quantitative in

nature.

3.4 Population

We have chosen the states of Ahmednagar and Pune in the Maharashtra city. For the study's population, construction workers and staff members will be chosen. Our research is centered on the impact of unskilled labor in the building process and the advantages of skilled labor since the construction businesses employed both skilled and unskilled employees in the field. This research intends to determine the impact of skilled and unskilled labor on building in the Maharashtrian cities of Ahmednagar and Pune. Construction firms in the districts of Ahmednagar and Pune have been chosen for the survey. The research has chosen a total of 10 businesses from Ahmednagar and 10 businesses from the Pune area. whereas 384 replies in total were gathered. Total 384 responses collected from both cities in which 192 from Ahmednagar and 192 from Pune.

4. Data Analysis and Interpretation

Descriptive Statistics of Data Comparisons between the Ahmednagar and Pune

Table shows Descriptive Statistics of Data and Comparisons between the Ahmednagar and Pune

In Table the mean and mode values for each question of questionnaire for construction industries Ahmednagar and Pune.

	Ahmednagar		**Pune**	
	Mean	**Mode**	**Mean**	**Mode**
1. Age:		3		1
2. Experience in the construction industry?		3		4
3. Your Role in the Project;		3		2
4. Is your project facing time overrun?		2		2
5. Is your project facing cost overrun?		2		2
6. Your satisfaction level with your projects' quality?	4.19	5	4.29	5
7. Your satisfaction level with your projects' productivity?	3.19	4	2.98	3
8. Impact of unskilled workforce on increasing cost of construction project;	4.13	5	4.19	5
9. Impact of unskilled workforce on the delay of construction project;	3.78	4	3.71	4
10. Impact of unskilled workforce on reducing quality of construction project;	3.81	5	3.71	4
11. Impact of unskilled workforce on low productivity of construction project;	4.03	5	4.09	5

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12. Impact of unskilled workforce on rework probability in construction project;	3.61	4	3.59	4
13. Impact of unskilled workforce on revenues of construction project;	3.33	4	2.86	4
14. Impact of unskilled workforce on profits of construction project;	2.34	2	2.45	2
15. Impact of unskilled workforce on payment to workers of construction project;	3.58	4	3.46	3
16. Impact of unskilled workforce on size of construction labor of construction project;	2.66	3	2.45	2
17. Impact of unskilled workforce on increasing accidents' rates in construction project;	3.92	4	3.94	5
18. Impact of unskilled workforce on reducing organizations' competitiveness;	2.99	2	3.02	2
19. Impact of unskilled workforce on enterprise failure;	4.04	5	3.97	5
20. Impact of skill development on economy performance of construction project;	4.01	5	4.05	5
21. Impact of unskilled workforce on time performance of construction project;	3.68	4	3.70	4
22. Impact of unskilled workforce on quality performance of construction project;	3.53	4	3.38	3
23. Impact of unskilled workforce on productivity performance of construction project;	3.51	4	3.32	4
24. Impact of unskilled workforce on safety performance in construction project;	3.19	2	3.20	3
25. Impact of unskilled workforce on organizations' competitiveness;	2.74	2	2.60	3
26. Impact of unskilled workforce on enterprise success;	3.92	4	3.86	4

Based on the descriptive analysis difference between Ahmednagar and Pune district for the impact of unskilled workforce on construction sector can be understood as follows;

- Most of the respondents were very satisfised with the projects' quality in Ahmednagar and Pune both.
- Most of the respondents were highly satisfised with the projects' productivity in Ahmednagar and, whereas most of the respondents were moderately satisfised with the projects' productivity in Pune.
- Most of the respondents believe that there is high impact of unskilled workforce on the delay of construction project in Ahmednagar and Pune both.

- Most of the respondents believe that there is high impact of unskilled workforce on the delay of construction project in Ahmednagar and Pune both.
- Most of the respondents believe that there is very high impact of unskilled workforce on reducing quality of construction project in Ahmednagar, whereas there is very impact of unskilled workforce on reducing quality of construction project in Pune.
- Most of the respondents believe that there is high impact of unskilled workforce on low productivity of construction project in Ahmednagar and Pune both.
- Most of the respondents believe that there is high impact of unskilled workforce on rework probability in construction project in Ahmednagar and Pune both.
- Most of the respondents believe that there is high impact of unskilled workforce on revenues of construction project in Ahmednagar and Pune both.
- Most of the respondents believe that there is low impact of unskilled workforce on profits of construction project in Ahmednagar and Pune both.
- Most of the respondents believe that there is high impact of unskilled workforce on payment to workers of construction project in Ahmednagar, whereas there is moderate impact of unskilled workforce on payment to workers of construction project in Pune.
- Most of the respondents believe that there is moderate impact of unskilled workforce on size of construction labor of construction project in Ahmednagar, whereas there is low impact of unskilled workforce on size of construction labor of construction project in Pune.
- Most of the respondents believe that there is high impact of unskilled workforce on increasing accidents' rates in construction project in Ahmednagar, whereas there is very high impact of unskilled workforce on increasing accidents' rates in construction project in Pune.
- Most of the respondents believe that there is low impact of unskilled workforce on reducing organizations' competitiveness in Ahmednagar and Pune both.
- Most of the respondents believe that there is very high impact of unskilled workforce on enterprise failure in Ahmednagar and Pune both.
- Most of the respondents believe that there is very high impact of skill development on economy performance of construction project in Ahmednagar and Pune both.
- Most of the respondents believe that there is high impact of unskilled workforce on time performance of construction project in Ahmednagar and Pune both.
- Most of the respondents believe that there is high impact of unskilled workforce on quality performance of construction project in Ahmednagar, whereas there is moderate impact of unskilled workforce on quality performance of construction project in Pune.
- Most of the respondents believe that there is high impact of unskilled workforce on productivity performance of construction project in Ahmednagar and Pune both.
- Most of the respondents believe that there is low impact of unskilled workforce on safety performance in construction project in Ahmednagar, whereas there is moderate impact of unskilled workforce on safety performance in construction project in Pune.

- Most of the respondents believe that there is low impact of unskilled workforce on organizations' competitiveness in Ahmednagar, whereas there is moderate impact of unskilled workforce on organizations' competitiveness in Pune.
- Most of the respondents believe that there is high impact of unskilled workforce on enterprise success in Ahmednagar and Pune both.

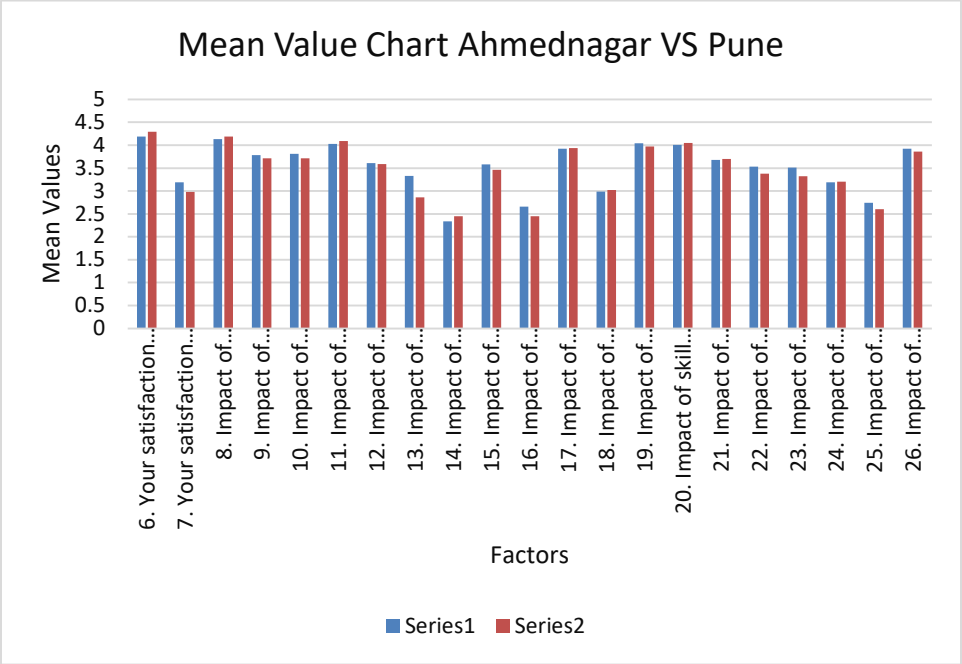

Fig.: Mean Value Chart Ahmednagar VS Pune

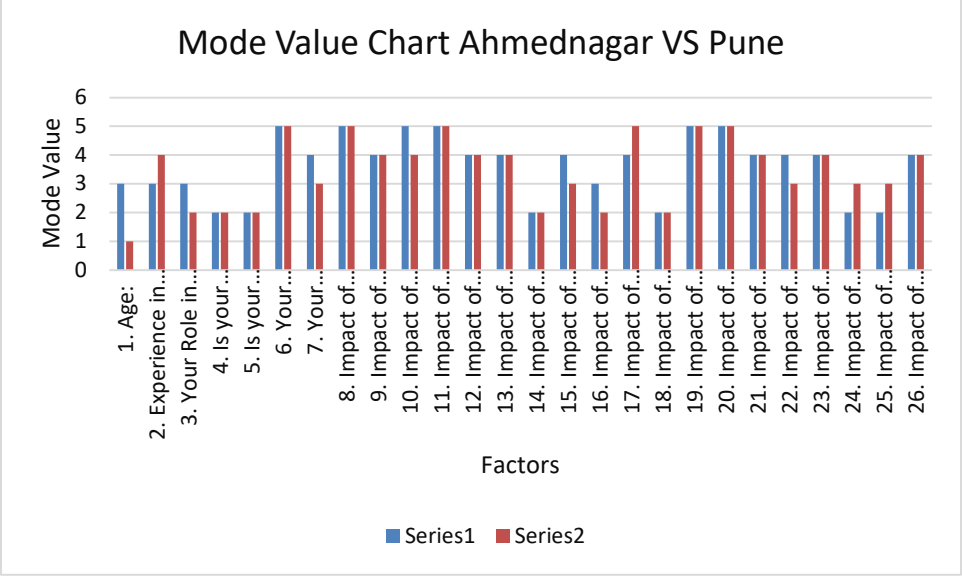

Fig. : Mode Value Chart Ahmednagar VS Pune

Correlation Analysis

Based on the values of Pearson's coefficient of correlation obtained through SPSS software, the significant positive correlation is found between the variables of the study, which justify the trustworthiness of results obtained from the study. The correlation table is shown below Table;

Table : Correlation Analysis

Pair	Description	Pearson's coefficient of correlation
Pair 1	6. **Ahmednagar:** Your satisfaction level with your projects' quality? - 6. **Pune:** Your satisfaction level with your projects' quality?	0.746
Pair 2	7. **Ahmednagar:** Your satisfaction level with your projects' productivity? - 7. **Pune:** Your satisfaction level with your projects' productivity?	0.646
Pair 3	8. **Ahmednagar:** Impact of unskilled workforce on increasing cost of construction project; - 8. **Pune:** Impact of unskilled workforce on increasing cost of construction project;	0.721
Pair 4	9. **Ahmednagar:** Impact of unskilled workforce on the delay of construction project; - 9. **Pune:** Impact of unskilled workforce on the delay of construction project;	0.621
Pair 5	10. **Ahmednagar:** Impact of unskilled workforce on reducing quality of construction project; - 10. **Pune:** Impact of unskilled workforce on reducing quality of construction project;	0.643
Pair 6	11. **Ahmednagar:** Impact of unskilled workforce on low productivity of construction project; - 11. **Pune:** Impact of unskilled workforce on low productivity of construction project;	0.678
Pair 7	12. **Ahmednagar:** Impact of unskilled workforce on rework probability in construction project; - 12. **Pune:** Impact of unskilled workforce on rework probability in construction project;	0.562
Pair 8	13. **Ahmednagar:** Impact of unskilled workforce on revenues of construction project; - 13. **Pune:** Impact of unskilled workforce on revenues of construction project;	0.973

Pair 9	14. **Ahmednagar:** Impact of unskilled workforce on profits of construction project; - 14. **Pune:** Impact of unskilled workforce on profits of construction project;	0.629
Pair 10	15. **Ahmednagar:** Impact of unskilled workforce on payment to workers of construction project; - 15. **Pune:** Impact of unskilled workforce on payment to workers of construction project;	0.734
Pair 11	16. **Ahmednagar:** Impact of unskilled workforce on size of construction labor of construction project; - 16. **Pune:** Impact of unskilled workforce on size of construction labor of construction project;	0.753
Pair 12	17. **Ahmednagar:** Impact of unskilled workforce on increasing accidents' rates in construction project; - 17. **Pune:** Impact of unskilled workforce on increasing accidents' rates in construction project;	0.721
Pair 13	18. **Ahmednagar:** Impact of unskilled workforce on reducing organizations' competitiveness; - 18. **Pune:** Impact of unskilled workforce on reducing organizations' competitiveness;	0.765
Pair 14	19. **Ahmednagar:** Impact of unskilled workforce on enterprise failure; - 19. **Pune:** Impact of unskilled workforce on enterprise failure;	0.963
Pair 15	20. **Ahmednagar:** Impact of skill development on economy performance of construction project; - 20. **Pune:** Impact of skill development on economy performance of construction project;	0.881
Pair 16	21. **Ahmednagar:** Impact of unskilled workforce on time performance of construction project; - 21. **Pune:** Impact of unskilled workforce on time performance of construction project;	0.783
Pair 17	22. **Ahmednagar:** Impact of unskilled workforce on quality performance of construction project; - 22. **Pune:** Impact of unskilled workforce on quality performance of construction project;	0.571
Pair 18	23. **Ahmednagar:** Impact of unskilled workforce on productivity performance of construction project; - 23. **Pune:** Impact of unskilled workforce on productivity performance of construction project;	0.752

Pair 19	24. **Ahmednagar:** Impact of unskilled workforce on safety performance in construction project; - 24. **Pune:** Impact of unskilled workforce on safety performance in construction project;	0.862
Pair 20	25. **Ahmednagar:** Impact of unskilled workforce on organizations' competitiveness; - 25. **Pune:** Impact of unskilled workforce on organizations' competitiveness;	0.682
Pair 21	26. **Ahmednagar:** Impact of unskilled workforce on enterprise success; - 26. **Pune:** Impact of unskilled workforce on enterprise success;	0.476

Thus, the Pearson's coefficient of correlation is obtained through SPSS software, the significant positive correlation is found between the impacts of unskilled workforce for construction projects and industries of Ahmednagar and Pune.

Hypothesis Testing

The following Hypothesis needs to tested for this research. T-test is applied for hypothesis testing.

H01: There is no significant difference between the responses of client and contractor with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

Ha1: There is significant difference between the responses of client and contractor with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

Table : Hypothesis testing for H01

Independent Samples Test for H01 (Result: NHA)										
		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
		F	**Sig.**	**t**	**df**	**P-Value**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**	
									Lower	**Upper**
H01	Equal variances assumed	.091	.764	.777	51	.41	.34966	.45021	-.55417	1.25350

	Equal variances not assumed			.787	29.419	.38	.34966	.44440	-.55867	1.25799

H02: There is no significant difference between the responses of client and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.
Ha2: There is significant difference between the responses of client and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

Table : Hypothesis testing for H02

Independent Samples Test for H02 (Result: NHA)										
		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
		F	**Sig.**	**t**	**df**	**P-Value**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**	
									Lower	**Upper**
H02	Equal variances assumed	.822	.369	1.809	51	0.67	.81419	.45014	-.08950	1.71787
	Equal variances not assumed			1.726	25.791	0.96	.81419	.47163	-.15565	1.78403

H03: There is no significant difference between the responses of contractor and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.
Ha3: There is significant difference between the responses of contractor and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

Table : Hypothesis testing for H03

Independent Samples Test for H03 (Result: NHA)		
	Levene's Test for Equality of Variances	**t-test for Equality of Means**

		F	Sig.	t	df	P-Value	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
H03	Equal variances assumed	.052	.820	.105	51	.17	.04392	.42004	-.79934	.88718
	Equal variances not assumed			.111	32.907	.12	.04392	.39571	-.76124	.84908

H04: Skill development is not significantly required in construction sector of Ahmednagar and Pune.
Ha4: Skill development is significantly required in construction sector of Ahmednagar and Pune.

Table: Hypothesis testing for H04

Independent Samples Test for H04 (Result: NHR)										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	P-Value	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
H04	Equal variances assumed	1.638	.206	-.227	51	.021	-.09966	.43936	-.98171	.78239
	Equal variances not assumed			-.211	24.555	.034	-.09966	.47159	-1.07181	.87249

If P-value < 0.05 then null hypothesis rejected (NHR), and if P-value > 0.05 the null hypothesis accepted (NHA). Therefore, based on hypothesis testing following conclusions were made.

- There is no significant difference between the responses of client and contractor with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.

- There is no significant difference between the responses of client and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.
- There is no significant difference between the responses of contractor and consultant with respect to the impacts of unskilled workforce on construction sector of Ahmednagar and Pune.
- Skill development is significantly required in construction sector of Ahmednagar and Pune.

Comparison between Ahmednagar and Pune district for significant difference between impact of unskilled workforce on construction sector

Null Hypothesis: There is no significant difference between Ahmednagar and Pune district for the impact of unskilled workforce on construction sector.
Alternate Hypothesis: There is significant difference between Ahmednagar and Pune district for the impact of unskilled workforce on construction sector.
Paired sample t-test is used to test the above hypothesis;
Statistically: If P-Value> 0.05 then null hypothesis accepted (NHA) and if P-Value< 0.05 then null hypothesis rejected (NHR).

5. Conclusion

The provided work includes research that analyses the effect of an untrained labor and the need for skill development in the construction industry of two districts in Maharashtra, namely Ahmednagar and Pune. The districts are named after their respective cities. In order to accomplish this goal, there were 384 people that responded to this questionnaire survey. Which resulted in the collection of 192 replies from the 10 construction businesses in Ahmednagar, as well as 192 responses from the 10 construction industries in Pune.
Analysis of collected data illustrate following major points:

- The questionnaire is found to be valid as the Value of ACP is calculated as 92% and 94 % for Ahmednagar and Pune, respectively. which is well above the recommended value of 90% (Poham. 1978). Thus, the developed questionnaire was valid.
- The data collected from questionnaire survey is found to be reliable as the Cronbach's Alpha values are calculated as 0.921 and 0.901 for Ahmednagar and Pune, respectively, therefore, the data obtained from questionnaire survey can be considered as reliable.
- In the questionnaire survey, most of the respondents were from 41-50 Years age group in Ahmednagar and Pune both.
- In the questionnaire survey, most of the respondents were having experience of 6-9 years in Ahmednagar and Pune both.
- In the questionnaire survey, most of the respondents were from contractor group in Ahmednagar and Pune both.

- In the questionnaire survey, about half of the respondent's projects were facing time and cost overrun in Ahmednagar and Pune both.
- In the questionnaire survey, it is found that unskilled labour force increases the time and cost of construction project in Ahmednagar and Pune both.
- The unskilled labour force has negative impact on quality and productivity of construction project in Ahmednagar and Pune both.
- The unskilled labour force also increases the rework probability in construction project in Ahmednagar and Pune both.
- The unskilled labour force negatively influences the success of construction project and construction industries of Ahmednagar and Pune both.
- It is also found that there is high impact of unskilled workforce on the various performance indicators of the project such as labour and equipment safety and revenue generated etc.
- A skill workforce group give the better employees performance in the construction project.
- Through various data source such as internet it is found that the 77 per cent labourers in the construction industriesof Ahmednagar are men. Most of the skilled labourers belong to Bihar, Chhattisgarh and Uttar Pradesh whereas the unskilled hail mostly from Jharkhand
- It is also found that the 72 per cent labourers in the construction industries of Pune are men. Most of the skilled labourers belong to Bihar, Chhattisgarh and Uttar Pradesh whereas the unskilled hail mostly from Jharkhand
- Pearson's coefficient of correlation is obtained through SPSS software, the significant positive correlation is found between the impacts of unskilled workforce for construction projects and industries of Ahmednagar and Pune.
- The skill development programs fill the skill gaps of workforce, increase retention of employees, improve risk management of project, and also new workforce can be recruited through skill development programs.

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