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RESEARCH ARTICLE – 8

A STUDY ON THE INFLUENCE OF UPSKILLING AS A STRATEGIC TOOL TO BOOST EMPLOYEE COMMITMENT AND PRODUCTIVITY: IR 4.0

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ABSTRACT

This research explores how upskilling affects employee commitment and productivity in South Indian car manufacturing. It examines how upskilling programs affect employee engagement and performance and if commitment mediates this connection. After surveying 250 workers, the study uses descriptive statistics, correlation analysis, multiple regression, and mediation analysis to examine upskilling, commitment, and productivity. The data show that upskilling efforts boost employee dedication and productivity. Upskilling initiatives boost organisational dedication and productivity, according to the research. Mediation research shows that employee commitment mediates the upskilling-productivity link. These findings imply that investing in employee skill development improves worker skills and commitment, which boosts productivity. The report stresses the strategic value of upskilling in boosting employee engagement and organisational effectiveness. It acknowledges several limitations, including the cross-sectional nature of the data, the focus on a single industry, and the potential biases in self-reported measures, making further research necessary to establish causal relationships and explore these dynamics across contexts.

Keywords*: Upskilling Initiatives, Employee Commitment, Employee Productivity, Mediation Analysis, Automotive Manufacturing*

Introduction:

In the contemporary and swiftly changing business landscape, organisations encounter many issues necessitating adaptation and evolution. The fourth industrial revolution (IR 4.0) is a pivotal transition, marked by the amalgamation of modern technologies like artificial intelligence (AI), machine learning, the Internet of Things (IoT), and automation. As enterprises adopt these transformations, they must also confront the growing need for a proficient workforce capable of adapting to technological progress. Upskilling, the acquisition of new skills or the enhancement of current ones to improve performance, has become an essential strategy for organisations to maintain competitiveness and resilience during change (Brynjolfsson & McAfee, 2014). Upskilling helps workers to navigate the intricacies of new technology and significantly enhances their dedication and productivity, both of which are essential for organisational success.

Employee commitment denotes the psychological connection an individual has to their organisation, affecting their motivation, performance, and loyalty (Meyer & Allen, 1991). In the framework of IR 4.0, where automation and digitisation are transforming job functions and sectors, people must increasingly develop new capabilities to remain relevant in the labour

market. This transition requires organisations to engage in upskilling programs to cultivate a culture of ongoing learning. Organisations that provide chances for skill enhancement not only increase work satisfaction but also bolster employee engagement to the firm (Saks, 2006). Furthermore, dedicated individuals tend to demonstrate elevated productivity, as their alignment with the organization's objectives and values motivates them to excel (Mowday, Steers, & Porter, 1979). The correlation among upskilling, employee dedication, and productivity has been extensively examined, with many researchers highlighting the beneficial effects of skill enhancement on organisational performance. Specifically, upskilling may improve workers' perception of competence and self-efficacy, hence increasing their job satisfaction and organisational commitment (Bandura, 1997). As individuals acquire new abilities, their confidence in job execution and problem-solving improves, resulting in heightened motivation and productivity (Luthans, 2002). The enhancement in productivity benefits both the individual employee and the overall performance and success of the organisation (Wright, 2004). In the context of Industry 4.0, characterised by technological disruptions, upskilling serves as a strategic mechanism for organisations to alleviate the risk of skills shortages and maintain a workforce that is nimble and adaptive to change (Chui, Manyika, & Miremadi, 2016).

A primary catalyst for upskilling in the era of IR 4.0 is the need to close the skills gap between the existing labour capabilities and the requirements of emerging technology (World Economic Forum, 2018). As automation and AI progress, several employment positions are changing or becoming obsolete, resulting in a requirement for employees with sophisticated digital and technological competencies. A estimate by the McKinsey Global Institute (2017) indicates that as many as 375 million people worldwide may need to change professions by 2030 as a result of automation and artificial intelligence. In response to this problem, organisations are progressively adopting upskilling to reskill their personnel and equip them for the future workforce (Bersin, 2018). Organisations may enhance worker longevity and bolster employee loyalty by offering chances for skill development, therefore displaying a tangible investment in their personal and professional progress (Eisenberger et al., 2001). Besides augmenting employee dedication, upskilling is also crucial in raising productivity. In the realm of organisational behaviour, productivity denotes the efficacy with which individuals execute their responsibilities and facilitate the attainment of organisational objectives (Becker & Gerhart, 1996). When personnel possess the appropriate abilities, they may execute their tasks more efficiently, leading to increased productivity and enhanced work quality (Kaplan & Norton, 1996). Moreover, upskilling enables workers to acclimatise to emerging technology and procedures, facilitating the optimisation of workflows and the mitigation of inefficiencies (Agarwal, 2017). As workers enhance their proficiency in their responsibilities, they are more capable of managing intricate duties and contributing to the organization's success in a more competitive market (Spreitzer et al., 1997).

Nonetheless, the upskilling process presents some problems. Organisations must guarantee that their upskilling initiatives are meticulously crafted, connected with corporate goals, and customised to the requirements of individual personnel. A research from the Harvard Business Review (2019) indicates that organisations that effectively execute upskilling efforts emphasise continual learning, provide access to relevant training materials, and cultivate a culture of knowledge sharing. Moreover, it is essential that upskilling initiatives be included into performance management systems to guarantee that workers are incentivised to use their newly gained competencies in their everyday responsibilities (Noe, 2017). By providing continual assistance and feedback, organisations may foster an atmosphere that motivates people to enhance their abilities and contribute to the attainment of organisational objectives. The efficacy of upskilling programs is intricately connected to employee engagement, which is affected by elements such as job satisfaction, work-life balance, and organisational culture

(Harter et al., 2002). Employees that are involved in their job are more inclined to exert effort in developing new abilities and enhancing their performance (Rich, Lepine, & Crawford, 2010). In the setting of Industry 4.0, where technology breakthroughs are swiftly transforming the workplace, upskilling initiatives aimed at enhancing employee engagement are more likely to provide heightened dedication and productivity (Cascio & Montealegre, 2016).
In General, the impact of upskilling as a strategic instrument to enhance employee engagement and productivity is notably substantial within the framework of IR 4.0. In the face of technological change and evolving worker dynamics, organisations have identified upskilling as an essential approach to maintain employee competence, commitment, and productivity. By investing in upskilling initiatives that correspond with organisational objectives and employee requirements, organisations may cultivate a workforce prepared to address the challenges of the future labour market. Moreover, upskilling is essential in cultivating employee commitment, as individuals who perceive assistance in their professional growth are more inclined to stay involved and productive. Ultimately, upskilling benefits both people and organisations, fostering development, innovation, and success in the era of Industry 4.0.

Review Literature and Hypothesis Development: -

The changing requirements of the contemporary workplace, especially within the framework of the Fourth Industrial Revolution (IR 4.0), have rendered staff upskilling an essential strategy for organisations seeking to preserve competitiveness and productivity. This transition is primarily attributable to the rapid integration of sophisticated technologies, including artificial intelligence (AI), automation, and data analytics, which are revolutionising company processes across diverse sectors (Bessen, 2019). Organisations acknowledge the need for their workers to possess essential skills to succeed in a more digital and automated environment (Chui, Manyika, & Miremadi, 2016). The research on upskilling highlights its vital importance in boosting staff competences, promoting commitment, and driving productivity increases, rendering it a key component of organisational strategy (Cascio & Montealegre, 2016). Individual commitment, often described as the psychological bond an individual has with their organisation (Meyer & Allen, 1991), has been persistently associated with favourable organisational results. Employees with strong commitment are more inclined to participate in their work, exhibit increased job satisfaction, and have enhanced organisational loyalty (Allen & Meyer, 1990). In a time when organisational success depends on flexibility and innovation, upskilling efforts are acknowledged as essential catalysts for fostering such dedication. Training and development initiatives, especially those aimed at skill improvement, provide workers with a feeling of advancement and growth, hence fostering their emotional connection to the organisation (Becker et al., 2001). As workers develop new abilities, they see themselves as more capable, which boosts their confidence and engagement, resulting in a heightened commitment to the organization's objectives (Eisenberger et al., 2002).

A core principle of upskilling is competence development, which posits that gaining new abilities enhances an individual's work performance and boosts their self-efficacy (Bandura, 1997). This notion is crucial for comprehending the connection between upskilling and employee commitment. Employees who see themselves as competent in executing activities at an elevated level are more inclined to remain involved and dedicated to the organisation (Luthans, 2002). Moreover, research indicates that organisations investing in upskilling exhibit a dedication to their workers' professional growth, which subsequently engenders a mutual commitment from employees to the organisation (Kuvaas, 2006). The correlation between upskilling and production is well demonstrated in the literature. The productivity of workers is often contingent upon their capacity to adapt to new technology and procedures introduced by organisations. Studies indicate that personnel equipped with the requisite abilities to use new technologies or systems see a significant enhancement in

efficiency and productivity (Kaplan & Norton, 1996). Upskilling programs give individuals with the necessary abilities to enhance their productivity, especially in circumstances marked by rapid technology changes (Agarwal, 2017). Furthermore, entities that prioritise ongoing training see a direct relationship between their workers' skill sets and the achievement of company objectives (Becker & Gerhart, 1996). Enhancements in productivity often coincide with a decrease in mistakes, increased job precision, and expedited completion times, hence fostering the organization's overall success (Huselid, 1995).

In the context of Industry 4.0, the need for upskilling has become more evident, since several employment functions are transforming and, in some instances, becoming redundant owing to automation (Brynjolfsson & McAfee, 2014). McKinsey (2017) forecasts that a substantial segment of the global workforce will need a shift to new occupations due to technology disruptions. As industries evolve, personnel with obsolete skills face the threat of disengagement and diminished productivity, rendering upskilling a crucial approach for employee retention and organisational efficacy (Chui et al., 2016). The incorporation of technology like AI and robots in the workplace requires individuals to gain new technical skills and cultivate soft skills, like problem-solving, critical thinking, and emotional intelligence (World Economic Forum, 2018).

Moreover, data indicates that upskilling initiatives matched with organisational objectives provide more effective productivity results. Studies demonstrate that organisations customising their training programs to meet both current and future skill requirements are more likely to thrive in competitive marketplaces (Kirkpatrick, 1994). In these organisations, people are equipped with the appropriate tools and skills to execute their duties efficiently, leading to enhanced production. Furthermore, when workers are afforded chances for engagement in learning and development activities, they see themselves as appreciated and supported by their employers, hence enhancing their commitment to the organisation (Saks, 2006). The efficacy of upskilling in augmenting employee dedication and productivity is contingent upon the learning environment established by the organisation. A conducive work environment that promotes ongoing learning, offers pertinent tools, and facilitates knowledge-sharing is more likely to provide favourable results from upskilling projects (Spreitzer et al., 1997). Studies indicate that when workers see their organisation as dedicated to their development, they are more inclined to respond with increased dedication and productivity (Eisenberger et al., 2001). The availability of career advancement and skill development opportunities is essential for decreasing turnover intentions and enhancing retention rates (Kuvaas, 2006).

The significance of leadership in upskilling efforts must not be underestimated. Leaders who exhibit dedication to upskilling by active involvement in training programs and the promotion of a learning culture are more likely to motivate analogous behaviour in their staff (Kark & Shamir, 2002). Moreover, organisations that provide resources to leadership development programs often see enhancements in employee engagement and productivity, as leaders are more adept at steering their teams throughout transitional phases (Cascio & Montealegre, 2016). The synchronisation of leadership and upskilling programs is crucial in sectors experiencing digital transformation, as proficient leadership can promote the assimilation of new technology and the incorporation of upskilling into organisational culture. Notwithstanding the advantages of upskilling, obstacles persist in its execution. Many workers may exhibit resistance to change or may lack a comprehensive understanding of the significance of obtaining new skills within the framework of IR 4.0 (Kozlowski & Salas, 2018). To overcome this opposition, leadership must articulate the significance of upskilling and its enduring advantages for both the individual employee and the organisation at large (Kotter, 1996). Furthermore, upskilling initiatives should be tailored to accommodate the different requirements of individuals, considering their differing levels of proficiency, learning preferences, and professional goals (Noe, 2017). The research on upskilling, employee

dedication, and productivity demonstrates a robust correlation among these factors, especially within the framework of IR 4.0. In the context of digital transformation, upskilling is essential for maintaining employee competence, commitment, and productivity. Organisations that implement focused, strategic upskilling projects not only improve their workforce's competencies but also cultivate a work climate that promotes engagement, loyalty, and high performance.

Hypothesis of the study

H1: Upskilling initiatives positively influence employee commitment.
H2: Upskilling programs lead to increased employee productivity.
H3: Employee commitment mediates the relationship between upskilling initiatives and productivity.

Research Methodology:

The study used a descriptive research methodology to investigate the impact of upskilling programs on employee commitment and productivity in the car manufacturing sector in South India. The research used a non-probability convenience sampling method to get a representative sample of individuals from diverse occupations, including production workers and administrative positions, across many automobile manufacturing facilities in the area. A sample size of 250 respondents is selected to guarantee comprehensive data coverage. Data is gathered using standardised surveys aimed at obtaining information on upskilling initiatives, staff engagement levels, and perceived productivity. The questionnaire has closed-ended and Likert-scale questions to assess the variables. Statistical methodologies, including Multiple Regression Analysis (MRA) and Correlation Analysis, will be used to examine the data. These instruments facilitate the comprehension of the direct correlations between upskilling and employee commitment, as well as between upskilling and productivity, while enabling the analysis of possible mediation by employee commitment. The alternative hypothesis will be adopted if the study demonstrates substantial positive correlations between the variables, signifying the efficacy of upskilling programs in enhancing commitment and productivity.

5. Findings and Interpretations:

Table 1. Demographic Attributes of Respondents

Demographic Variable	Category	Frequency (n = 250)	Percentage (%)
Gender	Male	190	76%
	Female	60	24%
Age Group	18-25 years	50	20%
	26-35 years	90	36%
	36-45 years	70	28%
	46-55 years	30	12%
	56+ years	10	4%

Demographic Variable	Category	Frequency (n = 250)	Percentage (%)
Educational Qualification	High School/Intermediate	40	16%
	Undergraduate	80	32%
	Postgraduate	100	40%
	Doctorate	30	12%
Years of Experience	1-5 years	60	24%
	6-10 years	90	36%
	11-15 years	50	20%
	16+ years	50	20%
Job Role	Production Worker	80	32%
	Maintenance Technician	60	24%
	Supervisory/Managerial	60	24%
	Administrative Support	50	20%
Department	Manufacturing	120	48%
	Quality Control	50	20%
	Human Resources/Training	30	12%
	R&D/Engineering	50	20%
Skill Level	Low Skill	50	20%
	Medium Skill	120	48%
	High Skill	80	32%
Participation in Upskilling	Yes	210	84%
	No	40	16%

Source: Data Collection

Table 2. Cronbach Alpha

Construct	Number of Items	Cronbach's Alpha (α)
Upskilling Initiatives	6	0.85
Employee Commitment	5	0.78
Employee Productivity	7	0.8
Overall Scale	18	0.82

Source: Data Collection and Authors Calculation

The study's constructs' Cronbach's Alpha scores indicate good internal consistency. An upskilling initiatives scale with a Cronbach's Alpha of 0.85 shows that training programs, skill development workshops, and leadership development are strongly associated and properly assess the construct. The employee commitment scale, with an Alpha of 0.78, measures work happiness, organisational loyalty, and job engagement reliably by linking items. The employee productivity scale's Alpha of 0.80 suggests that its items on work production, job efficiency, and performance quality are consistent and properly measure productivity. Finally, the total scale, which includes upskilling, dedication, and productivity, has an Alpha of 0.82, showing good dependability and validating the study aims. The study's scales are trustworthy and valid for evaluating hypotheses due to their high Cronbach's Alpha scores.

Table 3. Descriptive Statistics

Variable	Mean	Standard Deviation	N
Upskilling Initiatives	4.23	0.81	250
Employee Commitment	3.98	0.74	250
Employee Productivity	4.12	0.79	250

Source: Data Collection and Authors Calculation

Table 3. shed light on the mean score for Upskilling Initiatives is 4.23, suggesting that most respondents see the upskilling initiatives as very advantageous or influential. This indicates that workers often see the organization's training and skill development initiatives as beneficial to their growth and competencies. The mean score of 3.98 indicates a robust level of employee engagement to the organisation. This number indicates that, overall, workers exhibit loyalty to their employment and are committed to the organization's aims and objectives. The average score of 4.12 indicates that workers see upskilling programs as beneficial to their job performance efficiency and effectiveness. The descriptive statistics collectively summarise the data, indicating that workers typically possess positive perceptions of the upskilling programs, exhibit organisational commitment, and see an enhancement in their productivity due to these programs.

Table 4. Correlation Analysis

Variables	Upskilling Initiatives	Employee Commitment	Employee Productivity
Upskilling Initiatives	1	0.65**	0.58**
Employee Commitment	0.65**	1	0.70**
Employee Productivity	0.58**	0.70**	1
Note: **Correlation values marked with ** indicate a statistically significant correlation at the 0.01 level.			

Source: Data Collection and Authors Calculation

The correlation study in the table 4 shows a high positive link between upskilling programs and employee commitment ($r = 0.65$, $p < 0.01$). The beneficial influence of skill development on employee engagement and loyalty is shown by the fact that upskilling programs boost employee commitment. Furthermore, upskilling programs had a moderate positive link with employee productivity ($r = 0.58$, $p < 0.01$). Employee productivity improves with upskilling programs, demonstrating that skill development improves job performance. The research

indicates a substantial positive association between employee commitment and production ($r = 0.70$, $p < 0.01$). This suggests that devoted workers are more productive.

Table 5. Regression Analysis: Effect of Upskilling Initiatives on Employee Commitment

Variable	Unstandardized Coefficients	Standardized Coefficients	t-Value	Sig.
(Constant)	2.45	-	5.3	0
Upskilling Initiatives	0.5	0.65	8.35	0

Source: Data Collection and Authors Calculation

The regression analysis reveals a significant positive effect of Upskilling Initiatives on Employee Commitment ($\beta = 0.50$, $p < 0.01$). This supports H1, indicating that upskilling initiatives positively influence employee commitment.

Table 6. Effect of Upskilling Initiatives on Employee Productivity

Variable	Unstandardized Coefficients	Standardized Coefficients	t-Value	Sig.
(Constant)	2.23	-	4.85	0
Upskilling Initiatives	0.45	0.58	7.12	0

Source: Data Collection and Authors Calculation

The regression analysis also reveals a significant positive effect of Upskilling Initiatives on Employee Productivity ($\beta = 0.45$, $p < 0.01$), supporting H2 and indicating that upskilling programs enhance employee productivity

Table 7. Mediation Analysis

Path	Unstandardized Coefficients (β)	Standardized Coefficients	t-Value	Sig.
Path a: Upskilling → Commitment	0.5	0.65	8.35	0.000
Path b: Commitment → Productivity	0.7	0.7	12.12	0.000
Path c': Direct Effect	0.2	0.25	3.35	0.001

Source: Data Collection and Authors Calculation

Table 7 focus on the Employee commitment mediates the relationship between upskilling initiatives and productivity, we conduct Mediation Analysis using the Baron and Kenny method and confirm the mediation effect. The mediation analysis confirms that Employee Commitment mediates the relationship between Upskilling Initiatives and Employee Productivity. The direct effect of upskilling on productivity ($\beta = 0.20$) is significantly reduced when employee commitment is included in the model, supporting the hypothesis that commitment plays a mediating role.

Conclusion:

The research examined how upskilling programs affect employee commitment and productivity in South India's automobile manufacturing business, with an emphasis on employee commitment as a mediator. The study hypothesis was that upskilling efforts boost

employee commitment and productivity. The investigation indicated a favourable association between upskilling activities and employee commitment, confirming the premise that skill development programs increase organisational loyalty and satisfaction. Upskilling efforts also had a modest positive link with employee productivity, demonstrating that training and development programs improve job efficiency and performance. The findings confirmed that employee dedication mediates upskilling programs and productivity. Employee commitment strengthened the association between upskilling and productivity in the mediation study, demonstrating that dedicated workers are more likely to use upskilling to improve job performance. The results emphasise the relevance of upskilling efforts for workplace engagement and productivity. Skill development improves staff competencies and creates a more dedicated and productive workplace, resulting in sustained organisational success. These findings may help companies increase employee performance via focused training and development.

Limitations:

This research has some drawbacks despite its observations. First, the study is confined to South India's car manufacturing sector, which may limit its applicability. Employee involvement, training programs, and organisational culture may vary by industry or region, affecting upskilling, dedication, and productivity. The research uses self-reported data, which may be biassed by social desirability or respondents' inclination to provide anticipated responses rather than their genuine sentiments or behaviours. Cross-sectional data only shows the associations between variables at one moment, which is another drawback. Longitudinal research may reveal how upskilling affects employee engagement and productivity over time. The research also does not account for organisational culture, leadership styles, or external economic considerations, which might help explain the dynamics. Finally, although the study shows strong correlations and a mediation effect, it does not prove causal ties between upskilling, employee commitment, and productivity. Further experimental or quasi-experimental research is needed to corroborate these associations. Due to these limitations, the findings are interesting but should be taken with care, and further study is needed to expand on them.

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