



DIGITAL CAPABILITY, WORK REDESIGN, AND EFFICIENCY: A STUDY OF INDIAN MANUFACTURING FIRMS

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ABSTRACT

Digital transformation is often described as a path to manufacturing efficiencies with the introduction of connected equipment, enterprise software and manufacturing data but fails to conceal that this is where the efficiencies are going. In this paper, we look at the management issue of making digital investments into the appropriate employee behaviours and integrated organizational processes. Suggests a combined effect of employee digital capability and work redesign is necessary to conclude whether the digital transformation can lead to increased efficiency in Indian manufacturing firm. Based on Indian empirical research, official data and work design theory, the paper proposes a capability-redesign-efficiency matrix and evaluates the extent of the evidence. Covered industries grew by 11.89% in gross value added (GVA) current prices in 2022–23 to 2023–24 and by 5.92% in employment. Additionally, the percentage of unincorporated non-agricultural establishments that used the internet increased from 26.7 per cent in 2023–24 to 39.4 per cent in 2025. Even if neither can be used to prove that digital transformation is an efficiency gain, combining both highlights the need for considering the evolution in production capacity alongside variable levels of digital uptake. Digital capability has more value when employees see and make sense of information, act on exceptions, and improve the process; work redesign provides them the decision rights, coordination procedures, and backstops to make them productive. Evaluation of the multilevel research design is designed for further testing with employees' responses and with observed plant results. The suggested gift is a more accurate description of how digital transformation can improve employee and/or organizational efficiency and when it cannot.

KEY WORDS: Digital Transformation, Digital Capability, Work Redesign, Employee Efficiency, Operational Efficiency, Indian manufacturing, Industry 4.0.

1. INTRODUCTION

Indian manufacturers are being pushed to become more productive and achieve higher quality, reliability in delivery, and better utilization of resources, all in the face of a move to more digital production systems. Sensors can detect how well a machine is doing before it breaks down. MMS can interface manufacturing orders with shop floor actuals. Digital quality records can be used to identify regular defects for different shifts. Such applications can increase the knowledge that a firm would have regarding its applications. However, the economic benefit of them, hinges on the ability and authorization people have to utilize this information.

This difference is significant in terms of the management study. Even if the machine correctly sends an alert, it may be operationally useless if the maintenance technician will not know what it means, the supervisor does not have authority to change the production schedule, or the call for repair never makes it out of the departments. On the other hand, if software involves adding work steps to a workflow without any chance for improving performance, employees can have great technical skills and be provided with tools that do not generate advantages. The digital transformation is thus not merely digital infrastructure change, but also a change in the organization of work.

This is an extremely relevant problem in an Indian context. Skills development, support for manufacturing applications and demonstration facilities are a part of the

SAMARTH Udyog Bharat 4.0 initiative of the. The plan of the initiative takes into account the fact that technology diffusion involves learning and implementation in various firms of various capacities. New study has revealed persistent challenges with digital skills, real time monitoring, end to end planning, cyber security, and integration of the value chain among 174 manufacturing firms in India. These results suggest we should not equate the use of and access to digital tools with instances of organizational transformation.

This paper tries to answer the following major question: What are the organisational conditions under which the Digital transformation would lead to better employee efficiency and also Operational efficiency at the sub-unit level in Indian Manufacturing? It is not a general little slab of Industry 4.0; it is intentionally zoomed in. Educates on two mechanisms managers can affect: digital ability and work redesign.

Digital capability involves employee(s) ability to access, understand, assess and use information that requires a digital tool in calling of duty. Work redesign refers to the shift in allocation and coordination of tasks, decision making, communication and feedback following the implementation of digital technologies. The paper postulates that the two mechanisms work together. Even if the capability exists, redesigned work without an adequate capability will lead to more errors, uncertainty, or reliance on a fewer number of specialists.



The study is set against the backdrop of a larger research project on digital transformation and employee and organisational efficiencies in India's manufacturing industries. What it does – It specifically seeks to find a manageable explanation for the link of these overarching constructs. It also sets out ways in which employee outcomes and plant outcomes are separated, and how by future research, a connection between them could be tested without assuming the two levels to be interchangeable.

2. RESEARCH PROBLEM AND OBJECTIVES

Research on manufacturing digitalization typically focuses on the adoption of technology, the performance of the organization. There are others that explore the learning of employees and individual performance. There are few explicit links in the literature that make the connection between employees' capability to use digital tools and independently measured plant efficiency in the same modelling context and link to redesign of work. The isolation has implications. A company may have strong sales or be ramping up its output production but the workers face more disruption of work or more work time involved in administration. Likewise, workers can work quicker and still decrease the productivity of the whole operation.

The paper has four aims:

1. To make the distinction between digital technology adoption and employees building the necessary capabilities and organizations to make it work.

2. To describe a possible link between employee digital capability and employee/organisational efficiency which is applied through redesigning the work.
3. To analyse specific official data on manufacturing in the country, avoiding allocating the overall change to digital transformation.
4. To determine an empirical design that is feasible to test the proposed relationships in manufacturing firms in India.

Management research is considered as the basis of the Inquiry given the key variables are related to capability development, work organization, decision-making and performance measurement. It considers technology as a condition that can be enabled or not, according to managerial decisions.

3. INDIAN MANUFACTURING IN THE CURRENT DIGITAL CONTEXT

A credible analysis of digital transformation should begin with the scale and composition of the sector rather than with assumptions about universal adoption. The Annual Survey of Industries (ASI) provides information on industries covered by its survey frame, including output, value added, employment, and capital. Its estimates cannot be interpreted as a direct census of every manufacturing enterprise in India. Smaller unincorporated establishments are examined through a different statistical system, the Annual Survey of Unincorporated Sector Enterprises (ASUSE). The two sources describe overlapping economic concerns but different populations.

Table 1. Selected indicators from the Annual Survey of Industries

Indicator	2022–23	2023–24	Change or interpretation
Total persons engaged	18,494,962	19,589,131	5.92% increase
Gross value added, current prices, ₹ lakh	219,705,605	245,833,605	11.89% increase
Net value added per worker, ₹	1,286,457	1,355,122	Approximately 5.34% increase
Output per worker, ₹	9,910,810	9,875,779	Approximately 0.35% decrease

Source: Ministry of Statistics and Programme Implementation, *Annual Survey of Industries: Results for 2023–24*. Percentage changes in the final two rows are calculated from the published figures; the first two changes are consistent with the ministry's reported rates.

Table shows why efficiency is important and needs to be clearly defined. The gross value added grew, employment increased, output per worker was slightly lower in real terms and net value added per worker was higher. The implicit changes are related to denominators and accounting decisions. They certainly do not imply a single simple assertion that all aspects of labour productivity increased. The aggregates are also influenced by shifts in the composition of products, of costs, of prices, of capacity utilization, of capital-labour ratios, and in the composition of factories. There is no column in the data tables that shows whether or not a factory adopted digital technologies.

The internet use shares in the latest ASUSE (2025) indicate that internet use for all unincorporated non-agricultural establishments – manufacturing, trade and other service industries – rose from 26.7% in 2023–24 to 39.4% by 2025. The figures differ by 12.7 per cent. These are not only the digital adoption rate of manufacturing establishments. The use of the Internet is also an approach that demands far less than full production planning or quality control by computer. The result

nevertheless points to a growth of basic connectivity in a portion of the enterprise economy where a lot of companies are resource constrained.

Analytically speaking it is important to make a distinction between "connection" and "transformation. If the firm has gone electronic with sending their bills, this signifies a digital practice. The company with the system in place that connects order intake, inventory, production scheduling, quality feedback and employee decision-making has gone a bit further with its operating system. This should be measured separately in research. If both of these were counted as instances of "digital transformation" it would be difficult to see the management mechanisms that this paper is interested in examining.

According to official national accounts information, the contribution of manufacturing to gross value-added account of the official total output of India increased to 14.8% in 2025–26 on the revised 2022–23 base-year series in August 2026. This gives an economic context, but economic growth in national accounts and efficiency of digital firms are two separate things.



Their relationship needs to be identified rather than assumed based on simultaneous movement at the firm level through proper evidence.

4. REVIEW OF RELEVANT LITERATURE

4.1 Digital transformation and firm performance

Digital transformation is an organisational change that is related to the use of digital technologies and new processes of value creation. Indeed, Vial's analysis of digital transformation literature presents digital transformation as a phenomenon beyond the mere procurement of information technology, and as having strategic and organisational implications. In the case of research in manufacturing, it therefore implies that the technology inventory is an incomplete measure of changes. However, its role in decision-making and coordination needs to be examined.

Singh, Sharma, and Dhir explored the concept of digital transformation in Indian manufacturing, understanding the connections between antecedents like information-technology readiness and strategic alignment on one hand, and digital transformation and firm performance on the other. Their study confirms that organizational conditions are important in addition to technology. Yet a primary focus of its analysis is not the examination of task-level capability, work redesign and separate employee/plant outcomes suggested in the present paper. This distinction does not mean that Indian manufacturing research has neglected people per se, but is an indication of a potential extension of current research.

In India, recent plant-level studies from Poudel and Gopinath find positive productivity effects of digitalisation in both formal and informal manufacturing, and higher digital dividends for formal firms. The study is useful because it goes beyond impression of performance by the manager to look at outcomes relating to production. Now presents another line of inquiry that is relevant to the management of the firm: What are the mechanisms by which a firm can create these gains, and what does the different role of capabilities development for firms with less capability's development mean? In the present paper, the approach to that question is by way of employee 'capability' and work 'organization'.

4.2 Employee learning and digital capability

Studies on the performance of the automotive manufacturing sector in India offer proof of the importance of employee engagement in learning with digital tools. Gajendragadkar et al. (Arora, Trivedi and Neelam) conducted a study with 211 subjects (employees) and found that attitude toward use mediate between performance expectancy and employee performance in a digital-learning environment. The study validates the pertinence of employee-level mechanisms. This does not mean that the design itself provides evidence of redesign of tasks or of independent recording of plant outcomes improving after digital learning.

Digital capability should extend beyond being part of a training session. A process operator may have been instructed on how to enter data on a terminal, but could not determine whether the process variation is significant or merely a sensor error. A planner may view a dashboard and not have the expertise to determine if the forecast it is viewing applies to a specific machine, material or order. The framework constructed

here has four elements of digital capability: functional use of the system under review, interpretation of information, judgment of the limits of digital capabilities, and use of information to help make production decisions.

In this study, Indian business-to-business manufacturers (291) report a relationship between digital capability, supply-chain quality management, agility and performance. Strengthens the notion that the success with digital information isn't simply having software. Meanwhile, information from the supply chain cannot be used as direct evidence to judge the work of each employee every day, or the effectiveness of each production line. The amount of analysis should be made very clear.

4.3 Organizational readiness and work organization

According to a 2026 study of Industry 4.0 preparedness of 174 manufacturing organizations in India, the gaps in digital skills, integration of planning, monitoring, cybersecurity and value-chain integration have been identified. Although these barriers may be associated, they are not necessarily the same. A digital-skills gap is the difference between whether an employee can use information and whether it gets to the part of the firm that needs it in the form of good integration in planning. A combination of both can produce better results while acting individually can have a limited impact.

Committed leadership, collaboration and quality culture were identified as major organizational variables in the study of Quality 4.0 in an Indian manufacturing company. That is not to say, the same rank is valid for all Indian factories, because of its case-based approach. However, it pulls one's attention to something practical and namely that digital information influences performance only if people coordinate their actions to the information.

A broader theory underpinning the study of this coordination is offered by work design scholarship. Parker, Morgeson, and Johns demonstrate how the four design elements of content, autonomy, demands, and social structure of work impact employee and organizational outcomes. It is particularly valuable in a digitally connected factory, as an alert or recommendation can generate a new task, but still that job isn't changed. Who is the interpreter of the alert? Which action is justified, whose judgment is it? If the information is incorrect, who can be held responsible? These are not just software questions- they are questions about work design.

4.4 Synthesis and research gap

These sources of information together indicate three tentative conclusions. First, there has been a correlation between digital transformation and manufacturing performance, although what it entails does not indicate the causal relationship. Two, learning and digital dexterity among employees are not necessarily reflected in the performance – and one doesn't necessarily equal the other. Third, empirical research on readiness and work-design also indicates that coordination, authority and leadership have influence on the use of information.

The aim of this paper is to link these insights in one multilevel translation problem, which is proposed as a contribution. It asks, how are the products of a technological change manifested as an improved task, how is "an improved



task" translated into a better workflow and how does "a better workflow" translate into an outputs level of the workflow. Each step can fail. Considering these steps as distinct/ measurable relations makes the model useful in terms of theory and practice of management.

5. THEORETICAL FRAMEWORK: CAPABILITY, REDESIGN, AND EFFICIENCY

The framework combines a capability perspective with work design reasoning. Digital systems generate potential information and automation benefits. Employees require capability to use those resources. Managers must then redesign work so that information can inform timely action across task and departmental boundaries. Efficiency is the outcome to be evaluated, rather than an automatic property of a digital system.

Digital transformation is defined here as the purposeful integration of digital technologies into production or supporting processes, accompanied by changes in how information is captured, shared, and used. The construct includes technological integration but should not be reduced to spending on technology.

Employee digital capability is the demonstrated ability to use relevant systems and exercise informed judgment in a work task. It includes recognising data-quality problems and knowing when to seek human or specialist review. A narrow definition based only on software access would overstate capability.

Work redesign refers to deliberate changes in task sequence, allocation of responsibility, feedback, autonomy, coordination, and escalation. In a digitally supported maintenance process, for example, the work may change from responding after equipment failure to evaluating alerts, verifying probable causes, planning a stoppage, and documenting the result. Successful redesign specifies who performs each step and how the team learns from errors.

Employee efficiency refers to useful task performance in relation to time, effort, error, and rework, subject to quality and safety requirements. Completing more units per hour should not be treated as an improvement if defects or safety incidents rise.

Organizational efficiency concerns the conversion of inputs into reliable, quality-adjusted output at the production-unit or firm level. It includes coordination losses that individual performance measures can miss, such as waiting time between production and inspection.

These constructs are connected but should not be collapsed. An employee can become more efficient at entering inspection data while the firm's overall performance remains unchanged because no one acts on the resulting information. Conversely, a production line may appear more efficient after automation while the remaining workers face more complex exception handling. A defensible evaluation examines both outcomes.

The framework proposes four relationships for later empirical testing:

Proposition 1: Digital transformation is more strongly associated with employee efficiency when employees possess task-relevant digital capability.

Proposition 2: Employee digital capability is more strongly associated with employee efficiency when work redesign gives employees clear decision rights, usable feedback, and appropriate support.

Proposition 3: Work redesign partly explains how employee-level efficiency improvements become organizational efficiency improvements through better coordination across functions.

Proposition 4: The relationship between digital transformation and organizational efficiency varies with firm size, production complexity, and initial digital readiness.

These are analytical propositions, not findings from newly collected Indian firm data. They also permit null or adverse outcomes. If a new system increases documentation time without improving decisions, employee efficiency may decline. If its recommendations encourage premature action, defects or downtime may rise. The model is valuable partly because it identifies conditions under which a digital investment may disappoint.

6. RESEARCH METHODOLOGY

6.1 Design and evidence base

The methodological approach in this paper is conceptual, analytical with secondary evidence. It collates peer-reviewed studies on digital transformation/capability work design and Indian manufacturing. It relies on official releases of both ASI and ASUSE to report sector state and will depict measurement issues. The evidence was chosen because of its direct relevance on the proposed constructs as well as the availability of obvious original studies or government releases. This is not a systematic review or meta-analysis but a focused (integrative) review. No complete database search, pooled effect estimates or formal risk-of-bias score is offered.

The level of analysis for the secondary statistical discussion is the population that is represented in each government survey. There is a bold pendulum in the conceptual model between employees and work teams, and production units and firms. These differences are maintained, because, if an aggregate relationship is transferred to an individual employee, then an ecological inference error would occur.

6.2 Analytical procedure

The analysis consisted of 4 steps. First, it determined different definitions for the concepts of technology adoption, worker skills, job redesign and efficiency. Second, a review of Indian studies for evidence at the employee, organizational and plant levels was done. Third, it contrasted some of the official indicators to illustrate why output growth, value added growth and changes in the worker-level indicators are not necessarily treated as measures of the growth in efficiency. Fourth, it developed testable statements and a design that could be tested using primary data.

Official statistics were not used to estimate the effect of digital transformation. The figures subsequently listed in Table 1 as the ASI are descriptive; and the calculated changes reflect simple percentage differences between published figures. Frequently, monetary values are reported for current values, so



changes in monetary values should not be interpreted as changes in real productivity without using an appropriate price adjustment.

7. ANALYSIS OF THE SECONDARY EVIDENCE

7.1 Efficiency gains cannot be read directly from adoption

This is reflected in the official data, which indicates that the organized industrial sector continues to expand in 2023–24 as evidenced by growth in value added and employment. They don't bring names of companies here that are in the process of transforming to digital systems. Thus, it is not possible to draw a conclusion on the existence of a digital productivity effect from the simultaneous occurrence of the industrial development and the action programme Digital Policy. Saying that one inhalation causes another would require seeing that individuals are inhaled, and that they change as a result of that inhalation, as well as seeing other individuals who do not inhale and who do not change in the same way, and there must be control for other factors.

Table 1 reveals different movements which are analytically revealing. The growth of net value added per worker brings along improved value creation per worker (in current prices). The marginal decrease in output per worker suggests that using a different measure of outcomes will give a different story. Both these differences should not be attributed to training/automation or redesign of work if not supported by evidence at plant level. The selection of the indicator of efficiency is not a reporting option; it is a research design decision.

7.2 Capability is a constraint on the usefulness of information

A digital tool may render the problem apparent, but not show the answer. Think about a system to monitor other equipment that was being monitored by the computer and look for patterns of increased vibration. The competent maintenance personnel might examine if the signal has worn out or due to operating conditions or placement of sensors. An employee not as prepared as the other can overlook the alert or cause an unnecessary stoppage. The tools used are the same, the quality of the interpretation is different.

Although the studies of Indians included in this report are important with regard to learning and readiness, they are not necessarily evidence of the specific mechanism suggested in this illustration. The automotive employee study highlights digital-learning-related behavioural processes and their link to employee performance and the 2026 readiness study identifies the digital-skill and integration gaps in manufacturing organizations. Together, they are a good argument for directly measuring 'capability' rather than using hours of completed training as an adequate proxy.

Capability development should thus be connected to production activities. Familiarity may be enhanced through training and documentation which show the software interface. Training that also includes information on common situations where data fails, when to step up, and the ramifications of responding incorrectly is more likely to lead to better judgment. This is a theoretical expectation for empirical testing, rather than a measured training effect in this paper.

7.3 Work redesign determines whether local gains travel across the plant

Production flow is often under the control of individual employees. The main advantage of using a digital record is that a quality inspector will be informed of a defect sooner, but only if the information reaches the responsible operator, process engineer and supplier/m material handler in time to prevent the defect from occurring again. The existence of this sequence depends on work redesign.

But there are three elements that are particularly pertinent. Decision rights identify who gets to pause, adjust or escalate a process. Coordination routines provide some sequence in which information flows from role to role and a definition of expected response. Feedback loops indicate to workers whether or not their decision solving the problem was correct. If these factors are not present, digital tools will create additional data and additional notifications but won't break the production blocker.

Besides, digitalisation creates additional work which needs to be addressed in the work redesign. During implementation, manual and electronic records might coexist. Alerts can be subject to verification. Reconcile problems often result from data-quality issues. Even if the time saved in one work is measured in a study, but the salvation on other work, such as, is not being accounted, a result of such a study may show a big gain for the organization. This is why the employee & plant results in the proposed model are distinct.

7.4 Uneven capacity may produce uneven benefits

ASUSE figures show a broader presence of the Internet in the case of unincorporated enterprises, but provide no evidence of the capability for integrated manufacturing systems. The startups vary in their capital access, availability of the specialists, interoperable software, reliable data, and time to develop employees. The 2026 study to assess manufacturing readiness also shows a difference in readiness between larger organisations and smaller enterprises. Initial conditions might consequently affect the returns to seemingly identical technologies.

This implies that a very interesting possibility from an empirical point of view could be that the biggest apparent benefits from a digital system will be where firms have complementary managerial resources. If the research only uses advanced plants, the research results may be different to those of a smaller manufacturer with the same software. On the other hand, a set of inexpensive, mismatched applications in a smaller company could be worth more than an expensive, well integrated system in a much bigger company. These possibilities can't be taken for granted, but must be compared.

8. DISCUSSION

The key theoretical argument of the paper is one of digital transformation as happening through levels of translation. A technology that makes information available for a first time in a task. Employee capability impacts understanding of that information. Work redesign has an impact on whether or not an informed response is permitted and coordinated. Subsequently, response may be repeated, which may impact measurable plant performance. A source of variation is introduced at each stage.



It is an account of how this general statement that “digital transformation improves performance,” becomes more precise. It also serves as an explanation for the lack of encouragement. The probable limitation of Capability is the inability of employees to make sense of a system. When they comprehend it but can't change a process, work design is probably the limitation. Any constraint other than interdepartmental coordination or an unrelated bottleneck indicates that local improvements are taking place without impacts on the plant. Managers are guided to various interventions, based on the diagnosis.

The model needs to be tested. Indian research is available on readiness, learning, digital dexterity, and performance; however, they vary in terms of measures and population samples and cannot be aggregated into one estimated causal pathway. The proposed mechanism contained in the paper is a logical explanation. Here it is conceptual clarity, a measurement strategy and propositions that can be disconfirmed with subsequent evidence.

Another implication has to do with the concept of “employee efficiency.” While digital management systems can make a process more visible, it can also lead to over-management or to intrinsically lower goals. In fact, if design staff react to a positive dashboard reading by reducing quality, cooperation, or safety, it may be a sign of a suboptimal production system. The proposed model thus considers quality and safety to be constraints for an efficiency claim. An improvement should be discernible at the point of evaluating multiple outcomes that reflect the improvement.

9. MANAGERIAL AND POLICY IMPLICATIONS

For the manufacturer, the decision of which digital tool to use should be preceded by the definition of the operational problem. If the process has a large rate of defects, perhaps the goal is to reduce rework and shorten the time to failure (TTF) of the defect. During maintenance, it can be fewer occasions of system blocking without an undue rise in unnecessary interventions. Outcomes, which clarify at the beginning what a project on the Web is meant to accomplish, provide a way to determine if it has done so.

Implementation should then involve a combination of technology use with a capability assessment at a task level. Managers must be aware of who can operate the interface, understand the information being displayed and understand what to do if the signal is broken and that they need to follow an agreed procedure of action. Training needs should be adapted based on issues identified in training and no longer simply based on participation or completion rates.

Assessment should be accompanied by a work-redesign review. It should specify the “owner” of each new decision, procedures for exception escalation, the overlap between department interfaces, and any duplicate reporting points. This review should also involve those staff who are carrying out the work as they are likely to see constraints that are not represented in a process diagram. Their role is especially applicable where digital systems influence or alter the speed or intricacy of decisions in the front line.

For small manufacturers, collective demonstration or skill building centres can lower the price of learning about suitable applications. The SAMARTH infrastructure provides a

platform to experiment and train in reality in India. Any such support should be evaluated with regard to adoption and the subsequent changes in capability, workflow, quality, downtime, and resource usage. Just the number of demonstrations or installed systems can't be given as indication of operational improvement.

Finally, policy and management measures must also not presume that a single pathway of maturity is appropriate for every firm. An enterprise with a sporadic production record may need to begin first with data capture and an understanding of the responsibility to fix those errors. A higher-level company may be capable of moving machine, stock and planning information. The fit with existing capability is more defensible than a “default” approach to applying “the latest possible technology”.

10. LIMITATIONS AND FUTURE RESEARCH

The most important restriction is that there is no original firm level data in this paper. The two previously proposed propositions are still untried. The official indicators are used to provide context and a small descriptive comparison, and evidence from studies with other designs, sectors, and units of analysis are used from the literature review. Their results will not give evidence for a combined capability–redesign effect.

The Review is limited, not comprehensive. The fact that it contains directly relevant Indian studies does not imply that it is an exhaustive list of Indian manufacturing studies. The next step in the studies is to review other data bases for similar research, conduct systematic reviews of the methods used and separate out data obtained from automotive and food processing fab shops and chemicals, textiles and other subsectors whose production activities manifest different Production Tasks.

Repeatability of observations and different records of result should be given preference in future empirical studies. They should also consider more workers who are engaged in less technologically intensive work, such as contract workers and employees on other shifts who don't often show up in managerial evaluations. Differences in firm size, in product complexity, in the skills that exist and in the reliability of product data should be explicitly addressed within a framework of heterogeneity.

Lastly, one should make sure to keep in mind that improvement in efficiency might be inversely related to employee experience. Detectable problems can lead to less downtime but greater cognition or less flexibility. When the management evaluation reports these results in combination, the management is better: when an operational gain is made it doesn't always mean that the work was improved.

11. CONCLUSION

A manufacturing company in India can leverage digital transformation for wider information and options. The effectiveness of those options in enhancing efficiency will depend on what employees can do with them and how the organization shifts how they work. This paper elaborates an integrated perspective whereby employee digital capability is used for informed action, work redesign relates to coordinated work production and it is still distinct to see employee and organisational efficiency as outcomes to be measured. The official Indian data reveal a significant level of industrial



activity, and an increasing use of basic digital tools, as well as discrepancies in readiness and capability. While they offer an interesting context to the proposed research, they do not validate the causal statements in the research. The robust next step is an “employee use” multi-level study that connects to plant performance improvements documented. Under that design, the focus of a management scholarship would shift from whether or not firms have acquired a technology, to how and why firms that acquired a technology achieve useful, reliable, and sustainable efficiency gains.

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