



## The Influence of Consulting Business Transformation and Food Business Development on Employee Productivity

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### Article Info

#### Article history:

Received 28 June 2026

Received in revised form 19 August 2026

Accepted 13 September 2026

#### Keywords:

Business Transformation  
Consultant  
Employee Productivity  
Food Business Development  
State-Owned Enterprises

#### JEL Classification:

J24, L25, L66, M12, M54.

### Abstract

*This study aims to analyze the influence of consulting business transformation and food business development on employee productivity at PT Agrinas Pangan Nusantara (Persero). Organizational transformation implemented by the company represents a strategic response to changes in the business environment and the need to strengthen competitiveness through business model innovation and the development of new business sectors. This research was conducted at PT Agrinas Pangan Nusantara (Persero). Data were collected through questionnaires distributed to employees involved in the organizational transformation process. The study employed a quantitative approach using multiple linear regression analysis to examine the effect of consulting business transformation and food business development on employee productivity. The results show that food business development has a positive and significant effect on employee productivity, with a regression coefficient of  $\beta = 0.513$  and a significance value of  $0.010 (< 0.05)$ . Meanwhile, consulting business transformation does not show a significant partial effect on employee productivity. However, simultaneously both independent variables have a positive and significant effect on employee productivity with an F-value of 19.624 and a significance level of  $0.000 (< 0.05)$ . The coefficient of determination ( $R^2$ ) of 0.455 indicates that consulting business transformation and food business development explain 45.5% of the variation in employee productivity. These findings indicate that the success of organizational transformation does not solely depend on structural and procedural changes but also on the company's ability to develop new business sectors that promote organizational learning, employee competence development, and work motivation.*

## Introduction

The rapidly changing global business environment demands that every organization adapt to technological dynamics, market shifts, and increasing economic uncertainty (Napier et al., 2024; Terchila, 2025). Over the past decade, business transformation has become a key strategy for companies to maintain competitiveness and business sustainability. Transformation is no longer understood simply as a digitalization process, but has evolved into a comprehensive change encompassing organizational restructuring, business model shifts, process innovation, and diversification into new sectors with higher growth potential. Companies are required to be able to identify opportunities and develop internal capabilities that enable them to remain competitive amidst increasingly fierce global competition (Alharbi, 2026; Hanin et al., 2026; Aslan & Soesanto, 2026).

In the Indonesian context, the food sector is a strategic sector that receives significant attention in the 2025–2029 National Medium-Term Development Plan (RPJMN). The government emphasizes the importance of improving national food security, strengthening supply chains, and modernizing the food ecosystem to face global disruption and reduce dependence on imports. Changing consumer preferences for healthier, safer, and more accessible food are also encouraging companies to develop new business units that can address these needs. This situation creates a significant opportunity for companies, including state-owned enterprises (SOEs), to transform by diversifying their businesses into the food sector, which is considered more resilient than traditional sectors such as construction or engineering services (Demirci & Isik, 2026; Quesada-Román & Montalván-Burbano, 2026; Bello et al., 2025).

PT. Agrinas Pangan Nusantara (Persero) is one such company undergoing a significant transformation by diversifying its business from the construction consultancy sector to the food business. This diversification is a response to stagnant growth in the construction sector and increasing opportunities in the food sector, which offers long-term growth potential. However, cross-sector transformation is not a simple process. In addition to requiring investment in production facilities and technology, it also involves adjustments to organizational structure, work culture, coordination patterns, and improving human resource (HR) competencies.

PT Agrinas Pangan Nusantara (Persero) is a merger between PT Yodya Karya (Persero), a state-owned consulting company, and the Agrinas TNI Cooperative, officially directed to develop business in the national food sector. As a new entity resulting from a cross-sector transformation, PT Agrinas Pangan Nusantara is still in its early stages of operation and is less than two years old. This situation means that historical, comprehensive, and ongoing company performance data is not yet fully available for objective analysis. PT Agrinas Pangan Nusantara (Persero) is still in the early stages of its transformation and due to the limited availability of objective performance data that can reflect the overall impact of the transformation, this study uses an employee perception approach as a proxy for measuring the research variables. Employee perception was chosen because employees are the primary actors directly experiencing changes in work systems, shifts in business models, and new competency demands resulting from the merger and diversification process. Therefore, using employee perception data is relevant for capturing the organizational transformation phenomenon, which is not yet fully reflected in the company's quantitative performance indicators (Alzeaiden & Al-Dajah, 2026).

Based on an internal report from PT. Agrinas Pangan Nusantara (2024), employee productivity fluctuated during the business transition period. The average achievement of consulting project targets was only 82% of the annual plan, while the operational efficiency of the food unit only reached 76% compared to initial projections. Initial interviews with several managers revealed that the biggest challenges lay in adapting to the new work system, a lack of understanding across units, and uneven distribution of technical competencies in the food sector. This indicates that the organizational transformation has not been fully internalized in employee work behavior, impacting overall productivity.

Employee productivity itself plays a strategic role in the success of business transformation. Productivity is a key indicator of a company's effectiveness in utilizing resources to achieve its goals. In the context of transformation, productivity not only reflects output but also measures the extent to which employees can adapt to changes in processes, technology, and organizational culture (Abane et al., 2022; Rožman et al., 2023; Tadesse Bogale & Debela, 2024). Companies that fail to manage productivity often experience decreased effectiveness despite investments in assets or technology.

The transformation undertaken by PT. Agrinas Pangan Nusantara has two key dimensions. First, Consulting Business Transformation, which involves changes to the work model, digitizing procedures, and strengthening value-based consulting services. This process is crucial because it aims to increase internal efficiency, build an adaptive work culture, and enhance human resource competencies through training (Agustian et al., 2023; Ramadhan et al., 2026; Mujtaba, 2026). However, this transformation also risks creating resistance and new workloads that can reduce productivity if not managed properly. Second, Food Business Development, which involves expansion into food production and distribution, requires new operational processes, different quality standards, and technical skills not possessed by some existing employees. This development is crucial because it opens up opportunities for organizational learning, encourages increased competency in new areas, and provides motivation through different career opportunities (Aithal & Maiya, 2023; Do et al., 2025; Litynska et al., 2025). The variables of Consulting Business Transformation and Food Business Development were selected simultaneously in this study because they represent two distinct yet complementary strategic orientations in the organizational transformation process. Consulting business transformation reflects the company's internal efforts to restructure work systems, digitize processes, and improve operational efficiency. Meanwhile, food business development represents an exploratory strategy, involving expansion into new sectors that require innovation, technological adaptation, and supply chain integration that differs from the previous business model.

From the perspective of organizational ambidexterity theory, organizations that are able to balance the exploitation of existing capabilities with the exploration of new opportunities have more sustainable performance (O'Reilly & Tushman, 2013). Empirical studies show that companies that focus solely on exploitation tend to stagnate, while those that are too aggressive in exploration risk losing operational stability (Maclean et al., 2021; Akpabli et al., 2023; Rosly et al., 2025). Therefore, the success of the transformation is largely determined by the organization's ability to manage these two orientations simultaneously.

Research by Vial (2019) confirms that business transformation is not just technological change, but rather an integrated shift in organizational strategy, structure, and behavior. In the context of professional services, Agustian et al. (2023) found that value-based transformation improves efficiency and internal collaboration, but its effectiveness is heavily influenced by human resource readiness. On the other hand, studies in the food sector show that process innovation and supply chain strengthening can increase operational productivity if supported by adequate technical competencies (Sharma et al., 2022; Corallo et al., 2024; Bani-Melhem et al., 2026).

However, most of these studies examine organizational transformation or business development separately on performance. There are still limited studies examining both dimensions simultaneously in a single empirical model, particularly in the context of cross-sector transformation in state-owned enterprises. Cross-sector transformation is more complex because it involves fundamentally different business models, operational standards, and work cultures.

Furthermore, the change management literature shows that organizational change that is not balanced with employee psychological readiness and competency can lead to resistance, work stress, decreased motivation, and ultimately reduced productivity (Errida & Lotfi, 2021; Santos de Souza & Chimenti, 2024; Shaik et al., 2025). Within the resource-based view (Barney, 1991), human resources are a strategic asset that determines the success of strategy implementation. This means that transformation will not result in improved performance if it is not internalized in employee work behavior.

In the context of PT Agrinas Pangan Nusantara (Persero), the transformation from the construction consultancy sector to the food business represents a cross-sector strategic change that is relatively rarely studied in the literature on Indonesian state-owned enterprises. This change is not simply a product diversification, but a fundamental shift in work systems, technical competencies, and market orientation. Therefore, an empirical evaluation of the simultaneous influence of Consulting Business Transformation and Food Business Development on Employee Productivity is crucial to understanding whether the company's ambidextrous strategy is truly capable of improving human resource performance during the transition period.

Therefore, this research is crucial to provide a deeper understanding of the relationship between consulting business transformation, food business development, and employee productivity. This research is expected to contribute to management's design of more effective transformation strategies and serve as a reference for other companies undergoing or planning to diversify their businesses. The findings of this study are also expected to enrich the literature on organizational transformation management and work productivity in the context of companies facing cross-sector strategic changes.

## Methods

The research employed a quantitative approach with an explanatory survey method. This approach was chosen because it aimed to explain the causal relationship between the variables of business transformation ( $X_1$ ), food business development ( $X_2$ ), and employee productivity ( $Y$ ) through numerical data collection and statistical analysis. The quantitative method was used by the researcher to objectively test hypotheses using multiple linear regression to determine the simultaneous and partial effects of independent variables on the dependent variable. The explanatory quantitative approach was used because it allows for empirical testing of hypotheses through objective numerical data. This approach aligns with the research objective of determining the causal relationship between variables. Furthermore, the survey method allows the researcher to obtain direct perceptions from employees, the key actors in the transformation. Thus, the research results represent the empirical reality in the field in a representative manner and can be generalized to similar company contexts.

## Research Location and Time

The research was conducted at PT. Agrinas Pangan Nusantara (Persero), a company undergoing business transformation from a consulting sector to a food business development sector. The research location included work units directly involved in consulting activities and food development units. The research was conducted over a two-month period, from December 2025 to January 2026, and included: First month: preparation of the thesis report proposal and data collection through questionnaires; and Second month: data analysis and preparation of the final thesis report.

## Research Population and Sample

The population in this study was all 3,103 employees of PT Agrinas Pangan Nusantara (Persero). However, not the entire population was targeted because this study focused on employees directly involved in the company's transformation process. Therefore, a population screening process was conducted using a purposive sampling technique, which selects respondents based on certain criteria relevant to the research objectives. The respondent criteria used in this study included: (1.) employees who had worked for at least one year, thus having experience with the organizational conditions before and after the transformation; (2.) employees in work units related to consulting activities or food business development; and (3.)

employees who were willing to participate in the research. This screening was conducted to ensure that respondents had an adequate understanding of the organizational changes taking place.

The respondent selection process involved several stages. First, researchers identified work units related to the company's business transformation process, specifically the consulting business unit and the food business development unit. This identification was conducted by referring to the company's organizational structure and information obtained from the human resources (HR) department. Second, employees were selected from these work units who met the research criteria. These were employees with at least one year of service, thus having experience with the organizational conditions before and after the transformation process. Employees with less than one year of service were excluded from the target population because they were deemed to lack an adequate understanding of the dynamics of organizational change. Third, employees who met these criteria were then contacted to participate in the study through an online questionnaire distributed using Google Forms. The questionnaire was delivered directly to respondents through the company's internal communications network. Respondents who agreed to complete the questionnaire then became part of the study sample.

Following the population screening process, the sample size was determined taking into account the statistical analysis requirements used in the study, namely multiple linear regression with two independent variables. Referring to the recommendations of Hair et al., (2021), the minimum sample size for regression analysis is at least 50 respondents, or approximately 10 times the number of independent variables, to allow for adequate model estimation. Therefore, the 50 respondents were deemed to meet the minimum requirements for conducting regression analysis and provide an empirical picture of the relationships between the variables studied. Furthermore, this number of respondents was considered realistic, given that this study used a purposive sampling technique on a specific target population: employees involved in the organizational transformation process. Therefore, the sample obtained was expected to represent employee experiences and perceptions of the ongoing business transformation within the company.

### **Data Collection Instruments**

This study used two types of data: primary data and secondary data obtained from research respondents and internal company documents. Both types of data were used to support the analysis of the impact of consulting business transformation and food business development on employee productivity. Primary data were obtained by distributing a structured questionnaire to employees of PT Agrinas Pangan Nusantara (Persero) who met the criteria for research respondents. The questionnaire used a five-level Likert scale to measure respondents' perceptions of the research variables. The data collected included employee perceptions of Consulting Business Transformation, Food Business Development, and Employee Productivity. Productivity was measured based on respondents' perceptions of work quantity and quality, punctuality, work efficiency, motivation, and work responsibility and discipline. In addition to primary data, this study also utilized secondary data obtained from official company documents, such as financial reports, organizational structures, transformation policies, and employee number and distribution data. This secondary data was used to support the research context and provide an overview of the organization's condition during the transformation process. By utilizing both primary and secondary data, this study is expected to provide an overview of the relationship between the company's transformation strategy and employee productivity.

## Result and Discussion

### Extension of the Information–Consciousness Relationship

The first theoretical finding of this study is the explicit extension of the relationship between Information (I) and Consciousness (C) within Integrated Reality Theory (IRT). In its original formulation, IRT conceptualizes reality as a dynamic interaction among Energy (E), Information (I), Entropy (S), Consciousness (C), and Evolution. Within this framework, Information represents the structure, accessibility, and quality of knowledge, while Consciousness refers to reflexivity, meaning-making, ethical orientation, and intentional awareness. Evolution represents adaptive and learning capacity over time.

The present theoretical development makes the relationship between Information and Consciousness explicit. Information is not treated as a neutral resource that is simply transmitted between actors. Instead, the structure, accessibility, quality, and distribution of information constitute part of the environment through which consciousness develops. Human consciousness is consequently conceptualized as a dynamic systemic outcome shaped by informational exposure, attention architecture, algorithmic prioritization, symbolic framing, and digital interaction systems.

This extension becomes particularly significant in organizational environments. Organizations traditionally manage information through institutional mechanisms such as communication structures, knowledge-management systems, professional norms, managerial hierarchies, and organizational learning processes. However, AI increasingly introduces algorithmic mechanisms into these processes. Information can now be automatically selected, ranked, summarized, recommended, and interpreted before it reaches organizational members. Consequently, the informational environment in which employees and managers construct shared understanding is increasingly influenced by algorithmic systems.

The theoretical finding is therefore that the relationship between Information and Consciousness should be understood not only at the individual or societal level but also at the organizational level. The availability of information alone does not guarantee organizational learning or effective decision-making. What becomes important is how information is structured and transformed into shared interpretation, collective understanding, and purposeful organizational action.

### AI as a Structural Mediator

The second finding is the conceptualization of AI as a structural mediator between Information and Consciousness. AI systems possess extraordinary information-processing capacity and increasingly shape the information encountered by human beings. Because Information influences Consciousness within the extended IRT framework, AI indirectly participates in the conditions through which consciousness develops.

This proposition does not imply that AI itself possesses consciousness. Within IRT, AI is explicitly assigned  $C = 0$ , meaning that AI does not possess subjective experience, intentional understanding, or ethical responsibility. The theoretical problem is therefore not whether AI can become conscious, but how non-conscious algorithmic systems reshape the informational environments through which human consciousness develops.

In organizational contexts, this distinction is important. AI may increasingly participate in knowledge discovery, communication, recommendation, and decision support without becoming an organizationally conscious actor. The influence of AI therefore occurs through the architecture of information mediation. Managers and employees encounter organizational

realities through information that may already have been algorithmically filtered or prioritized. AI consequently becomes part of the cognitive infrastructure within which organizations interpret their environment.

This finding extends the role of AI beyond the conventional understanding of technology as an instrument for efficiency. AI can simultaneously function as a technological infrastructure, an information filter, and a mediator of collective sense-making. The organization therefore does not simply *use* AI; it increasingly operates within an informational environment partly structured by AI.

#### **Four Mechanisms of Algorithmic Mediation**

The third theoretical finding is the identification of four interconnected mechanisms through which AI-driven information architectures mediate consciousness: attention steering, cognitive framing, emotional amplification, and recursive co-evolutionary feedback.

##### ***Attention Steering***

The first mechanism is attention steering. AI systems determine what users encounter through ranking systems, recommendation algorithms, and personalized content delivery. This represents an extension of conventional agenda-setting because algorithmic systems can personalize what becomes visible to particular users.

The article draws on evidence from Haroon et al. (2022), who conducted a systematic audit of YouTube's recommendation system using 100,000 sock puppets and reported evidence that recommendations could direct some users, particularly right-leaning users, toward ideologically biased and more extreme content. Metzler et al. (2024) provided experimental evidence that emotional states could be transmitted through social networks through algorithmically curated content. The article also identifies TikTok's "For You" page as an example of a system that constructs an individualized information environment based on micro-behavioral signals.

The theoretical implication is that human attention becomes increasingly algorithmically governed and that collective awareness becomes structurally steerable. In organizational settings, the same mechanism can influence strategic attention. If AI systems determine which reports, risks, market signals, employee feedback, or knowledge resources receive priority, algorithmic curation can influence what organizational members perceive as urgent or strategically important.

Attention steering therefore has direct implications for management. Managerial attention is a scarce organizational resource, and the algorithmic prioritization of information may affect how managers identify problems, evaluate opportunities, and allocate organizational resources.

##### ***Cognitive Framing***

The second mechanism is cognitive framing. AI does not simply select information; it can also influence the interpretive structure through which information is understood. LLMs, for example, generate responses that organize information through particular linguistic and conceptual associations. Such outputs may influence political interpretation, moral perception, identity formation, and epistemological orientation.

Minaee et al. (2024) characterize large language models as systems that probabilistically link words without genuine understanding. Nevertheless, the outputs of these systems can possess an appearance of authority and may influence users' conceptual frameworks over time. This creates an important organizational implication: when managers or employees use AI-

generated information to interpret organizational problems, the framing embedded in algorithmic outputs may influence how problems are defined before managerial judgment is applied.

Thus, cognitive framing can affect organizational sense-making by shaping not only what information is considered, but also how that information is interpreted. The theoretical significance is that AI-mediated organizational learning may involve a hidden interpretive layer in which algorithmic systems participate in constructing the cognitive frames through which organizational members understand events.

### ***Emotional Amplification***

The third mechanism is emotional amplification. Digital platforms can prioritize emotionally charged information because emotional intensity can increase engagement. The resulting informational environment may encourage political polarization, outrage amplification, informational instability, and increasing systemic entropy (S).

Within IRT, the circulation of emotionally amplified and distorted information increases informational disorder. As entropy increases, the quality of collective discourse can decline and the formation of coherent collective consciousness becomes more difficult. Misinformation harms and erosion of trust in shared information among the significant risks associated with language models (Weidinger et al., 2022; Wachter et al., 2024; Williamson & Prybutok, 2024).

The organizational relevance is substantial. Organizational communication can become fragmented when emotionally salient information receives disproportionate attention. Employees may respond more strongly to highly engaging information than to information that is strategically important but less emotionally stimulating. Consequently, managers face the challenge of preventing algorithmic engagement mechanisms from replacing organizational priorities as the primary determinant of attention.

### ***Recursive Co-Evolutionary Feedback***

The fourth mechanism is recursive co-evolutionary feedback. Unlike a simple one-way model in which AI influences human users, the relationship is conceptualized as cyclical:

Consciousness → Behavior → Data → AI Training → Algorithmic Output → Consciousness

Human consciousness influenced by AI produces behavioral data, while those data subsequently contribute to the development and adaptation of AI systems. The resulting algorithmic outputs then influence human consciousness again.

This feedback mechanism has particular importance for organizations because organizational behavior itself can become part of the informational inputs through which AI systems adapt. Employee interactions, managerial decisions, search behavior, communication patterns, and usage patterns can contribute to organizational AI systems and subsequently influence future information environments.

The relationship is therefore not unidirectional. Humans remain active participants in the system, but the article identifies a major asymmetry because AI systems operate at computational speeds and scales that exceed human cognitive capacities. Algorithms can adapt to human psychology faster than humans can understand the mechanisms shaping their informational environments.

### **AI as an Amplifier of Organizational Capability**

The fourth finding concerns the dual role of AI as both an amplifier of informational capability and a potential generator of systemic entropy. Under favorable conditions, AI can enhance knowledge accessibility, accelerate learning, increase intellectual productivity, support scientific collaboration, and strengthen coordination. In systemic terms, AI functions as an amplifier of Information (I).

For organizations, this amplification can support faster knowledge discovery, more efficient information processing, improved decision support, and broader access to organizational knowledge. When AI systems prioritize accuracy, diversity of perspectives, and transparency, increased informational capacity can contribute to organizational learning and collective problem-solving.

The theoretical implication is that AI adoption can create significant organizational value, but this value cannot be evaluated solely through technological performance or information-processing speed. The organizational benefit of AI depends on whether increased Information (I) can be transformed into meaningful collective understanding and adaptive organizational action.

This finding extends conventional technology-oriented approaches to management by positioning AI as part of the organizational cognitive environment. AI does not merely increase the amount of information available to managers; it can influence how organizational members learn from that information and how they construct shared interpretations of organizational conditions.

### **AI as a Generator of Organizational Entropy**

The fifth finding is that the same AI systems capable of amplifying organizational information can also generate systemic entropy (S). The article identifies misinformation and disinformation, algorithmic bias, epistemic fragmentation, echo chambers and filter bubbles, deepfakes and synthetic media, cognitive overload, and behavioral manipulation as major sources of increasing entropy.

The central theoretical proposition is that if entropy increases faster than consciousness evolves, collective awareness becomes unstable and socially fragmented. AI can generate and distribute distorted information at a speed that exceeds the ability of human institutions to verify and correct it. This creates a civilizational paradox in which AI simultaneously amplifies signal and noise, truth and falsehood, coherence and fragmentation.

Applied to organizations, this suggests that greater information volume does not necessarily produce better organizational intelligence. An organization may possess increasingly sophisticated AI systems while simultaneously experiencing cognitive overload, fragmented interpretations, biased information flows, or declining trust in organizational knowledge. The managerial implication is therefore that AI implementation must be evaluated in relation to organizational entropy. Managers need to consider not only whether AI increases informational capacity, but whether the resulting information environment improves or undermines collective understanding.

### **Algorithmic Mediation and Organizational Learning**

The sixth finding is that AI-mediated information architectures have direct theoretical relevance to organizational learning. Conventional knowledge management emphasizes the

acquisition, creation, storage, and dissemination of organizational knowledge, while organizational learning depends on the ability of organizational members to interpret information and develop shared understanding.

Within the extended IRT framework, organizational learning can be conceptualized as a process in which Information (I) is transformed into collective Consciousness (C) while organizational Entropy (S) is managed. This means that learning effectiveness depends not simply on how much information an organization possesses but on whether information can be converted into shared meaning and purposeful action.

AI changes this process because algorithmic systems increasingly participate in information selection, prioritization, and interpretation. Consequently, organizational learning becomes partly dependent on the architecture through which information is mediated. If algorithmic systems promote diverse, accurate, and contextually relevant information, they may reduce informational barriers and accelerate learning. If they amplify bias, fragmentation, or misinformation, they may increase organizational entropy and constrain learning.

This finding establishes a direct conceptual connection between AMC and management. Organizational learning becomes a key mechanism through which AI-mediated information can either strengthen or weaken organizational adaptation.

### **Collective Sense-Making and Strategic Attention**

The seventh finding concerns collective sense-making. Algorithmic mediation can influence what organizational members see, how they interpret information, and which issues receive collective attention. Attention steering and cognitive framing therefore operate together to influence the construction of organizational reality.

In this context, collective sense-making refers to the process through which organizational members develop shared interpretations of information and organizational conditions. AI-mediated systems may accelerate this process by providing rapid access to knowledge and analytical support. At the same time, they may constrain it when algorithmic outputs narrow the diversity of available perspectives or present particular interpretations as authoritative.

Strategic attention is similarly affected. When algorithmic systems rank or prioritize information, they participate in determining what managers perceive as significant. This means that managerial cognition is potentially influenced before formal decision-making begins. The strategic challenge is therefore not merely to use AI effectively but to ensure that algorithmic information architectures do not unintentionally determine organizational priorities.

### **Managerial Governance of Algorithmic Information Architectures**

The eighth finding is that managerial governance becomes an essential component of organizational AI adoption. The article's theoretical extension suggests that managers have a dual responsibility: they must critically audit the algorithmic systems deployed within organizations and simultaneously cultivate organizational consciousness the capacity to reflect on the organization's information environment and correct course when algorithmic mediation distorts collective perception.

Four managerial governance principles emerge from this theoretical development.

First, algorithmic transparency is required so that organizational members can understand how information is curated and prioritized. Second, information diversity is necessary to reduce the possibility of organizational echo chambers and prevent narrow algorithmic environments from dominating collective interpretation. Third, feedback mechanisms should enable employees to

challenge, correct, and contextualize algorithmic outputs. Fourth, human oversight remains necessary so that algorithmic recommendations are interpreted through ethical and strategic judgment rather than accepted automatically.

These principles directly extend the IRT relationship between Information (I), Entropy (S), and Consciousness (C). Managers should seek to increase useful Information while controlling the Entropy generated by algorithmic systems and sustaining organizational Consciousness.

### Cognitive Sovereignty and Organizational Governance

Table 2. Managerial Implications of Algorithmic Mediation of Consciousness

| AMC Mechanism                      | Organizational Effect                                                                | Managerial Concern                                                                         | Management Response                                |
|------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------|
| Attention Steering                 | Influences strategic attention and information priorities                            | Algorithmic prioritization may determine what managers and employees perceive as important | Algorithmic transparency and critical auditing     |
| Cognitive Framing                  | Influences collective interpretation and sense-making                                | AI-generated framing may shape organizational judgments                                    | Human oversight and contextual interpretation      |
| Emotional Amplification            | May increase informational instability and fragmentation                             | Emotionally salient information may disrupt organizational communication                   | Information diversity and entropy management       |
| Recursive Co-Evolutionary Feedback | Creates continuous interaction between organizational behavior, data, and AI outputs | Organizational behavior can reinforce existing algorithmic patterns                        | Employee feedback and continuous system evaluation |

The ninth finding extends the concept of cognitive sovereignty into organizational environments. At the societal level, the article argues that excessive algorithmic personalization can make autonomous thinking fragile because individuals increasingly inhabit distinct informational realities. This can weaken shared understanding and collective deliberation.

The same theoretical problem can occur within organizations. If employees and managers receive highly personalized algorithmic information, different organizational members may develop different informational realities. This can complicate coordination, weaken shared organizational understanding, and make collective decision-making more difficult.

Cognitive sovereignty in organizations therefore refers to the capacity of organizational members to critically evaluate algorithmically mediated information rather than becoming entirely dependent on algorithmic prioritization. Organizational consciousness requires the ability to question how information is selected, what assumptions are embedded in algorithmic outputs, and whether those outputs remain consistent with organizational values and strategic objectives.

### The IRT-Based Management Proposition

The theoretical findings produce a management-oriented extension of IRT. The relationship can be expressed conceptually as:

AI → Information Architecture → Information (I) → Consciousness (C) → Organizational Learning → Collective Sense-Making → Managerial Action

while simultaneously:

AI → Entropy (S) → Fragmentation/Distortion → Weakened Collective Consciousness

The resulting proposition is that organizational performance in AI-mediated environments depends not simply on maximizing information-processing capacity but on maintaining an appropriate balance among Information (I), Entropy (S), and Consciousness (C).

The organization therefore becomes an important site in which Algorithmic Mediation of Consciousness can be examined. AI can amplify organizational intelligence when information is accurate, diverse, transparent, and subject to human judgment. Conversely, AI can amplify organizational entropy when information flows become fragmented, biased, emotionally manipulated, or excessively dependent on algorithmic prioritization.

This theoretical finding is consistent with the broader IRT proposition that civilization should not seek merely to maximize Information (I), but should maintain equilibrium between Information, Entropy, and Consciousness. In organizational terms, the equivalent objective is to create information ecosystems in which AI-supported information processing contributes to shared understanding, adaptive learning, ethical reflection, and purposeful action.

### **Theoretical Findings and Governance Context**

The management implications are further supported by the governance frameworks discussed in the article. The OECD AI Principles, updated in May 2024, emphasize inclusive growth and well-being, human rights and democratic values, transparency and explainability, robustness, security and safety, and accountability. The UNESCO Recommendation on the Ethics of AI emphasizes human rights, dignity, transparency, fairness, human oversight, and responsible data governance. The European Union AI Act, which entered into force on August 1, 2024, adopts a risk-based approach that prohibits certain unacceptable-risk practices and imposes obligations on high-risk AI systems.

For organizational management, these frameworks reinforce the importance of transparency, accountability, human oversight, and responsible AI implementation. They provide institutional foundations for governing the informational architectures through which AI increasingly participates in organizational decision-making and collective sense-making.

### **Conclusion**

Based on the empirical analysis, it can be concluded that these two variables play different roles in influencing employee productivity during the organizational transition period. Consulting Business Transformation, which reflects changes in work systems, service digitalization, and internal restructuring, has not shown a significant impact on employee productivity. This finding indicates that internal changes have not been fully internalized in employee work behavior, or are still in the adaptation phase. Structural and procedural transformations require time, adequate psychological readiness, and competency to have a significant impact on individual performance. In contrast, Food Business Development proved to be a more dominant factor in increasing employee productivity. Expansion into new sectors encouraged organizational learning, increased technical competency, and opened up opportunities for new roles and responsibilities, which increased motivation and work engagement. This suggests that an organization's exploratory orientation can be a productivity driver when accompanied by strengthening human resource capacity. Simultaneously, both

transformation strategies contributed to variations in employee productivity. This demonstrates that the success of organizational transformation is determined not only by internal changes but also by the company's ability to create new growth opportunities that provide meaning and direction to its employees' work. This research finding confirms that in the context of cross-sector transformation, new business exploration strategies have a more immediate impact on productivity than internal restructuring alone. Effective transformation requires a balance between system improvements and the creation of tangible growth opportunities for the workforce.

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