

# Smart Technologies and Corporate Sustainability

Amit Kansal, Professor

Department of Teerthanker Mahaveer Institute of Management Technology, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India  
Email id- amit.kansalmrt@gmail.com

**ABSTRACT:** *The relationship among smart technology and business responsibility is the topic of this article. The goal of this article is to investigate the function of business environmental agenda in regulating the relationship among intelligent technology and sustainable performance. The findings reveal that business initiative completely mediators the relationship among technological solutions and economic protection, as well as intelligent technology and societal conservation, based on surveys of 280 SMEs. Furthermore, technological solutions have a substantial impact on socioeconomic environmental, although this link is moderated in part by company renewable energy goals. Intelligent technology has no immediate impact on societal or ecological protection. This technique also aids in the reduction of wastage by guaranteeing that food is preserved in the best possible shape.*

**KEYWORDS:** *Energy, Environment, Smart, Sustain, Technology.*

## 1. INTRODUCTION

The increased possibilities of merging development and technology elements and mingling information between networks, automation methods, and interfaces demonstrate that modern mechanisms progressively draw usefulness from the structural relationships they retain (Saunila et al., 2019). Manufacture is becoming smarter, with companies increasingly relying on digital technology and monitors to collect information at various stages of a manufacturer's lifespan. Intelligent innovations that enable tangible goods to be addressed, programmed,

communicative, sensitive, identifiable, remembered, and associable allow for innovative physically and virtual quantities to be combined to create new objects and manufacturers. As technological solutions continue to advance at a breakneck pace, it's important to consider the ramifications they've spawned (Rey, 2020).

Several research underlines this need investigating the ramifications of technological progress, particularly intelligent technologies, from ecological, societal, and financial perspectives. The human and ecological components, on the other hand, may be regarded subcategories of corporation strategic plan in money businesses (Miller, 2020). As a response, an increasing amount of analyses indicate that businesses could develop circular economy plans that aim to balance the economic, cultural, and physical demands of the both public and business in order to accomplish global sustainable ("Animal Welfare for Corporate Sustainability: The Business Benchmark on Farm Animal Welfare," 2020). This suggests that business sustainably plan incorporates environmentally and socioeconomic factors into the organizational planning. Nevertheless, investigation on the significance of company environmental agenda in the relationship among intelligent technology and longevity performance is lacking (Fiorentino et al., 2020).

Depending on the foregoing assumptions, the goal of this research is to objectively investigate the impact of intelligent technology adoption on the 3 aspects of business sustainable: environmentally, cultural, and financial sustainable development. The article also seeks to investigate the function of company environmental agenda in buffering the relationship among smart technology and sustainable performance (Chung et al., 2019). To put it another way, it's critical to investigate if a company's policy plan can support the influence of intelligent technology on environmental governance. The findings reveal that company approach plan entirely regulates the relationship among clever technology and both ecological and management durability. Furthermore, technological solutions have a strong impact on socioeconomic environmental, but this link is controlled in parts by circular economy policy. Intelligent technology has no immediate impact on societal or ecological protection (Durán et al., 2021).

### *1.1 Smart technologies:*

Technological solutions saturate today's company processes and are changing the character of the industry. Companies, for example, are attempting to develop advanced control methods by incorporating home automation into machinery. Intelligent technology-enabled products or services provide unique features that transform their concept, production, distribution, and use. Furthermore, technological solutions have a lot of promise for creating novel activities, sensations, organizational structures, and interactions, since transmitter identifying tags, electronic sensing, networking, and computers produce essential smart technology qualities (CABA, 2014; Marcus Garvey Orji & Romanus Nduji, 2020; Mora & Deakin, 2019; Nantee & Sureeyatanapas, 2021).

### *1.2 Corporate sustainability:*

Out of a commercial standpoint, questions were addressed frequently takes a systemic approach, focusing on company processes in living processes. Firms, albeit company programs, are commonly acknowledged to be coevolving with various arrangements. This necessitates investments in both economically and environmentally and societal considerations. Elkington's balanced scorecard strategy, for one, views a company's long-term success to be contingent on addressing three areas of sustainable practices (García-Muiña et al., 2020; Roblek et al., 2020): human (socioeconomic circumstances), ecological (physical environs), and economical. The assumption behind ecological responsibility is that humans would live inside the biophysical constraints that govern the supply of existence and management costs. Environmental justice refers to the addition of societal support, such as via participation in regional societies.

### *1.3 Corporate sustainability strategy:*

Various environmental and strategic plans reflect the breadth and variety of the opportunities associated with unsustainable progress in terms of regenerating wealth for the organisation. The primary argument for taking a sustainably approach, according to the author, is to reduce the adverse ecological consequences of firm activities while improving the institution's financial outlook. Commercial governance strategy may be defined as plans that aim to "balance the industry's and social

conditioning generally cultural, physical(Carr, 2019), and economical demands." According to the author, a circular economy plan integrates environmentally and socioeconomic factors into the business planning processes and stresses a company's strategically position in perspective of long-term growth. When environmentally and economic considerations are incorporated into a company's mid- and long-term objectives, it is claimed that a judicious balance is achieved among needs of various stakeholder groups. Based on the foregoing, company sustainably agenda is defined in this analysis as the incorporation of global conservation concepts into company processes(Costanza-Chock, 2020a).

#### 1.4 Hypotheses development:

Our assumptions are supported by the accompanying logic. Technological inputs are seen to be a propelling factor for circular economy strategies and business viability since they minimize the demand for funds (physical, physical, etc.) and enhance the expectations for productivity. Sociocultural, ecological, and economic stability are all factors to consider when evaluating a company's long-term viability. Figure 1 shows the model and hypotheses(Costanza-Chock, 2020b).

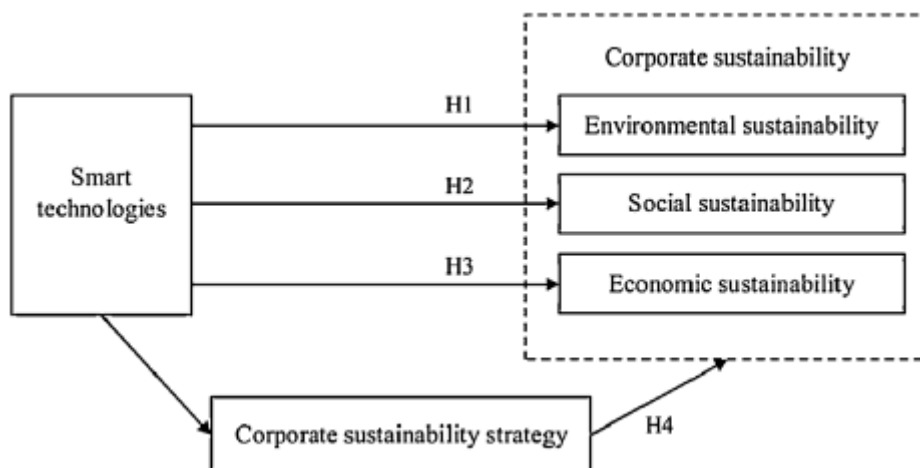


Figure 1: The above figure shows the model and hypotheses.

##### 1.4.1 Smart technologies and environmental sustainability:

Technical standards, such as knowledge and communications innovations and digitalisation manufacturing machinery, have already been thought to provide environmental benefits, such as lowering greenhouse gas (GHG) pollution. In

additional to reducing GHG emissions(Chang et al., 2019; Papoutsi & Sodhi, 2020), modern systems now allow for autonomous computer processes as well as resource management across several areas, such as manufacture, electrical generating, and agricultural, resulting in increased renewable fuel. Several types of virtual siblings, for instance, can generate real-time information sets alter and improve operations(Taneja, 2014).

#### *1.4.2 Smart technologies and social sustainability:*

It is proposed that the rising possibilities of merging development and technology elements, as well as blending material among facilities, manufacturing activities, and interfaces, draw usefulness from the functioning relationships that they preserve. When assessing the advantages and consequences of these technological solutions, social stability is amongst the most significant considerations(Aaker et al., 2011; Acosta & Leguizamo, 2020; Lestari, 2020; Salmeron, 2010; Yulia, 2020). The author investigated the use of power generation change and technological modelling to convert electronic shapes to physiological events without need for the need for parts and materials, implying social results such as equal true equality for all stakeholders in civilizations and marketplace, user-oriented commodities, increased consumer value, potential benefits for worker/human wellness, and impacts on a sector's work process(Mora & Deakin, 2019).

#### *1.4.3 Smart technologies and economic sustainability:*

Technology advancements and newer forms of intelligent devices can lower prices and provide potential for achieving various environmental targets. Modern and upcoming machine learning, in addition to providing opportunities for socioeconomic sustainable in the power industry, also give opportunities for economical sustainable in a variety of those other businesses. Numerous commodity methods and procedures, as well as computerized and digitally scanned fuel efficiency machine learning, may cut expenses and hence enhance the effectiveness of businesses in many businesses. Development of successful aid in the optimization of manufacturing operations as well as the complete consumer usage. As a result,

modern systems enhance the personnel, the location and organisation of premises, and the status of production machines(Sembiring, 2020).

## 2. DISCUSSION

The goal of this research was to look into the function of company environment goals in moderating the relationship among clever technology and green innovation. Smarter technology has been mentioned as playing a critical part in the long-term success of businesses. Our data contribute to the growing body of data that supports the importance of strategic plan in clever technology development.

## 3. CONCLUSION

The findings demonstrate that corporation environmental policy totally moderated the impact of smart technology on ecological responsibility. According to the research, integrating smart technology into corporate activities promotes the absorption of environmental durability concepts into company processes, which, as previously stated, leads to enhanced environmentally goals. Our findings complement the author's findings, which emphasise the importance of maintaining organizational capabilities and pathways in accordance with a long-term plan.

## REFERENCES

- Aaker, D. A., Competition, B. P., Morais, S. B. De, Oliveira, S. C., Tor, F., Andreassen, W., Gustafsson, A., Gebauer, H., BUURMAN, R. DEN, Chesbrough, H., Carl, F, F., Patrick, F., Dawson, P., Daniel, L., Drucker, P. F., Sander, K., Shankar, V., Carpenter, G., Holt, D. B., ... Management, S. (2011). Design Issues Author ' s Index ( 2004-2013 ). *California Management Review*.
- Acosta, D. A., & Leguizamo, G. E. J. (2020). Métodos y técnicas de cuantificación microbiana empelados en la industria de alimentos, farmacéutica, agrícola y ambiental. Revisión sistematica de la literatura. *Human Relations*.
- Animal Welfare for Corporate Sustainability: The Business Benchmark on Farm Animal Welfare. (2020). *Journal of Sustainability Research*. <https://doi.org/10.20900/jsr20200030>

- CABA. (2014). Improving organizational productivity with building automation systems. *Report*.
- Carr, C. (2019). Inside Smart Cities - Place, Politics and Urban Innovation. *DisP - The Planning Review*. <https://doi.org/10.1080/02513625.2019.1671034>
- Chang, C. C., DiGiovanni, K., & Mei, Y. (2019). Sustainability. *Water Environment Research*. <https://doi.org/10.1002/wer.1210>
- Chung, N., Tyan, I., & Lee, S. J. (2019). Eco-innovative museums and visitors' perceptions of corporate social responsibility. *Sustainability (Switzerland)*. <https://doi.org/10.3390/su11205744>
- Costanza-Chock, S. (2020a). Design Sites: Hackerspaces, Fablabs, Hackathons, and DiscoTechs. In *Design Justice*. <https://doi.org/10.7551/mitpress/12255.003.0008>
- Costanza-Chock, S. (2020b). Directions for Future Work: From #TechWontBuildIt to #DesignJustice. In *Design Justice*. <https://doi.org/10.7551/mitpress/12255.003.0010>
- Durán, C., Palominos, F., Carrasco, R., & Carrillo, E. (2021). Influence of strategic interrelationships and decision-making in chilean port networks on their degree of sustainability. *Sustainability (Switzerland)*. <https://doi.org/10.3390/su13073959>
- Fiorentino, R., Grimaldi, F., Lamboglia, R., & Merendino, A. (2020). How smart technologies can support sustainable business models: insights from an air navigation service provider. *Management Decision*. <https://doi.org/10.1108/MD-09-2019-1327>
- García-Muiña, F. E., Medina-Salgado, M. S., Ferrari, A. M., & Cucchi, M. (2020). Sustainability transition in industry 4.0 and smart manufacturing with the triple-layered business model canvas. *Sustainability (Switzerland)*. <https://doi.org/10.3390/su12062364>
- Lestari, F. K. (2020). PENERAPAN PEMBELAJARAN BAHASA INDONESIA ANAK

TUNAGRAHITA SLB NURUL IKHSAN DI ERA PANDEMI COVID-19 TAHUN AJARAN 2019/2020. *Jurnal Ilmiah NOSI*.

Marcus Garvey Orji, & Romanus Nduji. (2020). Business Sustainability and Challenges of Climate Change in Nigerian Indigenous Automobile Companies. A case study of Innoson Motors Ltd, Nnewi, Nigeria. *Konfrontasi: Jurnal Kultural, Ekonomi Dan Perubahan Sosial*. <https://doi.org/10.33258/konfrontasi2.v7i1.99>

Miller, T. R. (2020). Imaginaries of Sustainability: The Techno-Politics of Smart Cities. *Science as Culture*. <https://doi.org/10.1080/09505431.2019.1705273>

Mora, L., & Deakin, M. (2019). The social shaping of smart cities. In *Untangling Smart Cities*. <https://doi.org/10.1016/b978-0-12-815477-9.00007-4>

Nantee, N., & Sureeyatanapas, P. (2021). The impact of Logistics 4.0 on corporate sustainability: a performance assessment of automated warehouse operations. *Benchmarking*. <https://doi.org/10.1108/BIJ-11-2020-0583>

Papoutsis, A., & Sodhi, M. M. S. (2020). Does disclosure in sustainability reports indicate actual sustainability performance? *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2020.121049>

Rey, A. (2020). Editorial: Smart technologies, sustainability, and corporate digitalization. *Corporate and Business Strategy Review*. <https://doi.org/10.22495/cbsrv1i2editorial>

Roblek, V., Thorpe, O., Bach, M. P., Jerman, A., & Meško, M. (2020). The fourth industrial revolution and the sustainability practices: A comparative automated content analysis approach of theory and practice. In *Sustainability (Switzerland)*. <https://doi.org/10.3390/su12208497>

Salmeron, J. L. (2010). William E. Halal, Technology's Promise: Expert Knowledge on the Transformation of Business and Society, Palgrave MacMillan (2008) 183 pp., \$39.95. *Futures*.

Saunila, M., Nasiri, M., Ukko, J., & Rantala, T. (2019). Smart technologies and corporate sustainability: The mediation effect of corporate sustainability



strategy. *Computers* in *Industry*.

<https://doi.org/10.1016/j.compind.2019.03.003>

Sembiring, D. M. (2020). MENGHADAPI STRESS DI MASA PANDEMI COVID-19 DENGAN MANAJEMEN STRESS. *Human Relations*.

Taneja, O. (2014). An Approach to Improved Indoor Air Quality and Operations of Buildings: Adopt Smart Buildings Technologies and Train Operations and Maintenance. *ASHRAE Transactions*.

Yulia, F. W. (2020). ANALISIS FAKTOR YANG MEMPENGARUHI MASALAH KESEHATAN REPRODUKSI REMAJA SAAT PERIODE MENSTRUASI. *Human Relations*.