IRASS Journal of Multidisciplinary Studies
https://irasspublisher.com/journal-details/IRASSJMS
ISSN *(Online) 3049-0073*

The Efficacies of Technological Revolution and Innovation on Psychological Well-Being of Consumers

Nworgu, Samuel Nwachinemere[1*], Chinyere Willie Ndata[2]

[*1] Department Of Marketing, School Of Business And Administrative Studies, Captain Elechi Amadi Polytechnic Rumuola, Port Harcourt

[2] Department Of General Studies, School Of Foundation And General Studies, Captain Elechi Amadi Polytechnic, Rumuola, Port Harcourt

Corresponding Author Nworgu, Samuel Nwachinemere

Department Of Marketing, School Of Business And Administrative Studies, Captain Elechi Amadi Polytechnic Rumuola, Port Harcourt

Article History

Received: 19 / 06 / 2025

Accepted: 09 / 07 / 2025

Published: 12 / 07 /2025

Abstract: The effects of technological innovation and revolution on the psychological health of consumers were investigated in this study. An instance of technological revolution occurs when a new technology quickly replaces one or more existing technologies. Simple frequency, percentages, and linear regressions were utilised to determine the outcomes of the quantitative study, which included both parametric and inferential statistical methods (RHC, R-square, F-ration, and Durbin-Watson). Participants in this study included 100 employees of Rivers State's Obio/Akpor Local Government Area. The theoretical foundation of this investigation was wellbeing theory. Technological change has a favourable impact on consumers' psychological well-being, particularly by improving their quality of life and increasing their productivity in their personal lives, which in turn promotes national sustainability, according to the data gathered and analysed. In conclusion, the effects of technological innovation and revolution on consumers' psychological health will result in a process whereby people maintain change in a balanced environment. The research's conclusions led to the following recommendations: the government should support vigorous research and technological development initiatives that will result in technological revolutions and innovations, and it should provide sufficient funding for both public and private entrepreneurs with a technological bent.

Keywords: Technology, Innovation, Revolution.

How to Cite in APA format: Nwachinemere, N. S., Ndata, C. W., (2025). The Efficacies of Technological Revolution and Innovation on Psychological Well-Being of Consumers. *IRASS Journal of Multidisciplinary Studies, 2(7)1-5.*

INTRODUCTION

Since the successful exploitation of new ideas is a broad definition of innovation efficacy (NESTA, 2008), much innovation measurement to far has concentrated on innovation inputs. Innovation is the process of making a novel idea profitable or widely used, according to the Oxford Dictionary (2020). Thus, innovation is the process of coming up with a novel idea or notion. A technological revolution, according to Wikpedia (2018), is a time when one or more technologies are quickly superseded by another innovative one. This is a time of rapid technical advancement, and social change is usually accepted as a result of its diffusion. This demonstrates that the phrase "technological revolution" best captures the functions of rapidly declining costs and rapidly growing power in digital technologies like computers and telecommunications systems. It comes to the conclusion that charges in technology and society are frequently used to describe the subsequent occurrences as these technologies become more extensively employed. In digital communications, for example, repeating hardware can amplify the digital signal and transmit it without losing information (Fajemirokun & Idowu, 2007). The technological revolution transformed a lot of previously analogue technology into digital, which has a binary representation of ones and zeros. Additionally, technology-driven transformation in service is likely to accelerate further in the future because current technologies are increasing in speed, capacity, connectivity, functionality, and ease of use, while potentially ground-breaking innovations are still in their infancy.

Globalisation and outsourcing, for example, would not be as feasible as they are now without the internet, demonstrating the enormous economic influence of the technology revolution. Since the late 1990s, the cell phone has had a significant and quantifiable impact on consumer productivity. According to Wikipedia (2005), almost every facet of life is being recorded and preserved in some technological (digital) format as the revolution progresses. Due to the necessity for data storage, management, and retrieval in a variety of professions and capacities at their workplaces, technological advancements have led to the development of high-speed computers with huge memories (Parabaramen, 2000). As a result, customers have been greatly impacted by technological advancements, modern instrumentation, and methodologies. Eudemonia, which encompasses both enjoyment and individual experiences to find the meaning of life by utilising their full potential, is the source of psychological well-being. Because psychology has helped marketers better understand consumers and their purchasing patterns, technology innovation and revolution have made it easier for consumers to obtain goods and services that fulfil their everyday demands.

Optimistic Statement

Original “I like computer programmes that allow me to tailor things to fit my own needs”.

Discomfort statement

Original: “there should be caution in replacing important people’s tasks with technology because new technology can break down or get disconnected.

Insecurity Statement

Original: "I worry that information send over the internet will be seen by other people".

Rewarded

Original: "I worry that information I make available in the internet may be missued by others"

Technological motivators

- Saving time is usually what motivates me to upgrade or try new technology
- Improved quality of life

Aims of the study

The aim of this study is to ascertain the efficacies of technological revolution and innovation on consumer's wellbeing.

The specific aims include;

- To determine how technological revolution can enhance the psychological well – being of consumers to adopt innovations for national sustainability
- To ascertain how the feelings of gratitude among consumer's psychological well – being may moderate the influence of perceived service quality on their psychological well – being

Research Questions

The following research questions were formulated to ascertain the efficacies of technological revolution and innovation on consumer psychological well – being.

- What is the relationship between technological revolution and psychological well – being of consumers that promote national sustainability
- What is the relationship between feeling of gratitude among consumers psychological well – being and perceived service quality's

Hypotheses

The following null hypotheses were formulated to guide the study

- There is no significant relationship between technological revolution and psychological well – being of consumers that promote national sustainability.
- There is no significant relationship between feelings of gratitude among consumers psychological well-being and perceived service quality.

Review of Related Literature

Conceptual Review

In the end, the way we work will benefit our health and well-being. Research has indicated that individuals are working longer hours due to advancements in technology and inventions that lighten their workload. Numerous activities have been automated, and the work I do is being dismantled by contemporary communication technology (Seligman, 2011). The adoption of more flexible employment contracts is growing as a result of new technology. Our current perceptions of change will continue to increase due to the economic benefits of the digital economy.

These days, algorithms can identify the aspects influencing service and production quality and deliver pertinent data that boosts product capacity by 20%. Lee (2012). In addition to maximising accuracy and work flow, innovative machines minimise waste and materials (Vieira, 2018). Some of these technical advancements will benefit consumers by improving their psychological well-being. For example, remote control of the vehicles used at mining sites can eliminate the need for human divers and the dust exposure they would otherwise face. A major factor in mental health is people's sense of control over their work, which can be increased with more flexible work arrangements made possible by increased smartphone use. Furthermore, studies have shown that the psychological well-being of consumers can positively impact their own health (Lee et al., 2012; Huppert et al., 2013; Seligman, 2011). These modern, flexible ways of working also have health benefits, as people add specific value to automated processes. Sub-domains of sustainable development have been considered also; cultural, technological and political while sustainable development may be the organizing principle for sustainability for some, for others, the two terms are paradoxical (ie. Development is inherently unsustainable).

Many in the field define sustainability through the following interconnected domains or pillars: environment, economic, and social. According to Pritjof Capra, sustainability generally refers to the ability of human civilisation and the biosphere to coexist in the twenty-first century. Sustainability is also the process by which people maintain change in a balanced environment, where resource exploitation, investment direction, technological development, and institutional change are all in harmony. Development that satisfies current demands without jeopardising the capacity of future generations to satisfy their own needs is known as sustainable development. Research has demonstrated that innovations and technological revolutions are the keystones of sustainability. Magee et al. (2013), Silvio (2013), and Michael (2005). Technology is the practical application of scientific knowledge, particularly in the industrial sector. According to Parasuraman (2000) and Mick et al. (1998), technology can make customers feel both good and bad. Furthermore, Parasuraman contended that customers would behave differently to new technologies depending on how dominant positive and negative sentiments are about them. According to Davis et al. (1989), prior research has found particular consumer attitudes and motivations that may improve perceived ease of use, form, or reduce perceived hazards in the adoption of new technology.

Theoretical Frame Work

In contrast to those who have low levels of well-being, those who have greater levels of well-being say that well-being is valuable not only because it feels nice but also because it has positive real-world consequences:

- Perform better at work
- Have more satisfying relationship
- Are more cooperative
- Have stronger immune system

According to Seligman's Theory of well-being 'PERMA' (1998). He asserts that there are five building blocks that enable flourishing:

- Have better physical health and mental health

- Live longer
- Have reduced cardiovascular mortality
- Have fewer sleep problems
- Have greater self-control

As more skills are taught and learnt, a better psychological well-being is enhanced and attained. This suggests that as consumers become more involved in the use of technologies and thrive in the workplace, there is success, positive emotion, engagement, relationship, meaning, and accomplishment. Additionally, workplaces see increases in employee well-being and performance. Additionally, studies show that in order to maintain well-being, people want social belonging and supportive, pleasant interactions (Diener et al, 2014).

As technology develops and new innovations are created and supported, this fosters supportive and positive relationships and a sense of social belonging that helps sustain consumers' psychological well-being. This is because good networking during the technological revolution improves skills and fosters the development of social connectivity, which leads to an increase in the sustainability of social relationships. Additionally, consumers of these goods and services enjoy more positive psychological well-being as they gain positive abilities and satisfaction in life, as the technology revolution reduces unpleasant experiences and suffering at work, home, and in schools. As a result, the basic demands of customers are met. According to the hedonistic theory of well-being, happiness is based solely on the equilibrium of one's position over unpleasant conscious experiences (Chappell et al., 2023). Therefore, the goal of the technological revolution is to improve customers' psychological health by overcoming their painful or bad conscious experiences.

Method/Participants

The research design for this study is correctional research survey because the study is purely quantitative. The population of this study is comprised of one hundred participants drawn from staff of Obio/Akpor Local Government Area of Rivers State.

Cochran's Sample Size Formula

Formula $nx = \frac{z^2\text{-}p\ (1\text{-}p)}{e2}$

Where:

nx = sample to be determined

z = value of 2 table at 95% confidence level = 196

e = sampling error @5% = 0.05

p = maximum variability of the population at 5% = 0.5

$nx = \frac{(1.96)2\ 0.5\ (1\text{-}0.5)}{0.052}$

$nx = \frac{1.0016 \times 0.25}{0.052}$

$nx = \frac{1.0016 \times 0.25}{0.0025}$

100 Sample

For gathering data in the field, the study tool used was the Liker's 4-point scale: Strongly Agree (SA-4), Agree (A-3), Disagree (D-2), and Strongly Disagree (SD -1). Using sample frequency percentages and linear regressions, both parametric and inferential statistical tools were used to determine the results (RHC, R-square, F-ration, and Durbin-Watson). To determine whether there is a significant link between the independent and dependent variables, linear regression correlates them at the 95% confidence level and 5% significant level. Therefore, reject the null hypothesis (R>P (0.05) reject HO while the correlational coefficient is more than 5% of the significant level (R>P (0.05) Accept HO).

Research Question 1

Table 1: Analysis of Research Question 1

Item	Questions	SA	A	D	SD
1.	New technologies contribute to a better quality of life	70 (70%)	20 (20%)	7 (7%)	3 (3%)
2.	Technology gives more freedom of mobility	80 (80%)	15 (15%)	3 (3%)	2 (2%)
3.	Technology gives more people more control over their daily lives	80 (80%)	16 (16%)	4 (4%)	-
4.	Technology makes me more productives in my personal life	75 (75%)	20 (20%)	4 (4%)	1 (1%)

Source: survey data, 2023

The results of the descriptive analysis of research question 1 are shown in Table 1, which reveals the relationship between the technological revolution and consumer psychological well-being that promotes national sustainability. Item 1 states that 70 respondents (70%) and 20 respondents (20%) strongly agree and agree that the technological revolution and consumer psychological well-being promote national sustainability, while 7 respondents (7%), and 3 respondents (3%), disagree and strongly disagree with the statement. According to item 2, 80 (80%) and 15 (15%) of the respondents believed that the technological revolution and consumers' psychological well-being support national sustainability, while 3 (3%), and 2 (2%), strongly disagreed with the statement. While 4 respondents (4%) disagree with the statement, 80 respondents (80%) and 16 respondents (16%) strongly agree that the technology revolution and consumers' psychological well-being enhance national sustainability. In item 4, it is found that 75 respondents (75%) and 20 respondents (20%) strongly agree and agree that the technology revolution and the psychological welfare of consumers are responsible for national sustainability, while 4 respondents (4%) and 1 respondent (1%) strongly disagree and disagree.

Research Question 2

Table 2: Analysis of Research Question 2

Item	Questions	SA	A	D	SD
5.	I felt cheerful and in good spirit	80 (80%)	10(10%)	7(7%)	3(3%)
6.	I felt calm and relaxed	85(85%)	10(10%)	4(4%)	1(1%)
7.	I felt active and vigorous	80 (80%)	15(15%)	3(3%)	2(2%)
8.	My daily life has been filled with thing that interest me.	90(90%)	10(10%)	-	-

Source: Survey Data 2023

The results of the descriptive analysis of study question 2, which reveals the connection between customers' psychological wellbeing and perceived service quality and their feelings of thankfulness, are shown in Table 2. Item 5 emphasises that of the respondents, 80 (80%) and 10 (10%) strongly agree and agree that they feel happy and in good spirits after adopting each new technology, while 7 (7%), and 3 (3%), disagree. When asked if they feel peaceful and relaxed when using a new technology, 85 (85%) and 10 (10%) of the respondents strongly agree, while 4 (4%), and 1 (1%), disagree and severely disagree with item 6. The results of 7 then show that 80 (80%) and 15 (15%) respondents strongly agree and agree that they feel energised and active whenever they interact with new technology, whereas 3 (3%), and 2 (2%), respondents disagree. According to item 8, 90 (90%) and 10 (10%) of the respondents highly agree and agree that the technological revolution updates of our day have filled their daily lives with things that interest them, while none of the respondents disagree or strongly disagree with that statement.

Test of Hypothesis

Hypothesis 1: there is no significant relationship between technology revolution and psychological well-being of consumers that promote national sustainability.

Table 3: linear regression result of hypotheses mode RR adjusted STD RF, DPDF 5.8 F-square, Square error

Test of Hypotheses

The hypotheses testing confirms the association between the dimensions and measures of this study. The criterion value for decision making is at 5% significance level and 95% confidence level respectively. If r is greater than 5% level of significance, we accept the alternate hypothesis and reject the null hypothesis vis-à-vis.

Hypothesis 1: There is no significant relationship between technological revolution and psychological well-being of consumers that promote national sustainability.

Table 3: Linear Regression Result of Hypothesis 1

Mode	R	R Square	Adjusted Square	R. Std. Error	RF Square Change	F Change	Dif 1	Dif 2	Sig F. Change	Durbin Mode Watson
1	.957	.931	.938	462.420	.902	846.354	6	4	.000	2.787

Source: Survey Data, 2023

- Predictor: (constant), SR
- Dependent variable CV

The results of hypothesis I are displayed in Table 3, which suggests a strong correlation between the psychological well-being of consumers and the technological revolution, which supports national sustainability. The alternative hypothesis, which states that there is a significant association between the technical revolution and the psychological well-being of consumers that support national sustainability, is implied to be accepted by the decision rule since r is more than the 0.5 level of significance. The presence of auto correlation in the model specification is demonstrated by the f-statistic test value of 846.354, which is statistically significant since it exceeds the decision-making criteria value of 2.0.

Hypothesis 2: There is no significant relationship between feelings of gratitude among consumers psychological well-being and perceived service quality.

Table 4: linear regression result of hypothesis 2

Mode	R	R Square	Adjusted Square	R. STD. Error	RF Square Change	F Change	Dif 1	Dif 2	Sig f. change	Durbin Mode Watson
1	.818	.745	.768	131.081	.744	645.882	6	4	.000	2

- ✓ Source: survey data, 2023
- ✓ Dependent Variable: CV

The results of hypothesis 2 are shown in Table 4, which shows a substantial correlation between consumers' psychological well-being and their perceptions of service quality and sentiments of thankfulness. The correlation coefficient, r.818 (more than the decision threshold), is higher. Because r is greater than the 0.05 level of significance, the decision rule suggests that we accept the alternative hypothesis and reject the null hypothesis, indicating a significant relationship between perceived service quality and feelings of gratitude among consumers' psychological well-being. The F statistic test value of 645.882 is statistically significant. The Durban Watson statistic of 2.0008 is statistically significant because it is greater than the criterion value of 2.0 for decision making, this illustrates the presence of auto correction in the model specification.

Discussion of Findings

The conclusions of this study were derived from the answers to the research questions and hypotheses. They think that the technology revolution has a good effect on consumers' psychological health, particularly by improving their quality of life and increasing their personal productivity, which in turn supports national sustainability. Customers' psychological well-being and perceived quality of services tend to improve when they feel grateful, especially when they are happy and in a good mood and want to avoid humiliating themselves with technology in their daily life.

Conclusion

People will maintain change in a balanced environment where resource exploitation, investment direction, technological development direction, and institutional change all work together harmoniously and can support present and future potential to meet human needs and aspirations as a result of the positive effects of technological revolution and innovation on psychological well-being.

Recommendations

For technological revolution and innovations that impacts on national sustain ability, the following measures have become imperative:

- Promotion of aggressive research and technological development activities oriented to technological revolution and innovations.
- Adequate funding of private and public entrepreneurs who are inclined to technologically development.
- Promotion and sales of already made technologies in order to encourage young entrepreneurs.

References

1. Bech, P. (2004). Quality Of Life and rating scales for depression, in Preskon S.A, Feighner, J.P, Stranga C. Y. Ross, R (Ed): antidepressant past, present and future. New York, springer, pp. 148-170.
2. Bech, P.C & Wermuth, L. (1998). Applicability and validity of the major depression Inventory in patients with Parkinson's disease. *Nord j Psychiatry 52: 305-309*.
3. Blogs https://blogs. Ise.ac.uk.
4. Chappell, R.Y. & Meissner, D. (2023). Theories of well-being. In R.Y. Chapell, D. Meissner, and W. MacAskill (eds.), An Introduction to utilitarianism EI https://www.utilitarianism.net/theories-of-well-being>iaccessed 6/27/2023.
5. Davis, F. D., Bagozzi, R. P &Warshaw, P. R. (1989). "User Acceptance of computer Technology: A Comparison of two Theoretical Models, Management, Science, 35 (8), 982-1003
6. Diener, E.D, and Seligman, M.E.P, (2004). Beyond Money: Towards an Economy of Well-being volumes 5, issue F https://doi.org/10.1111/j.0963-7214.00501001.x
7. Fajemirokun, F. A. & Idowu T.O. (2007). Impact of digital technology revolution on surveying curriculum.
8. Fava, g. A. (1999) Well-being therapy: conceptual and technical issues. Psychother psychosom, 68:171-179.
9. Fava, G.A. (2013). Clinical Judgment in Psychiatry Requiem or Reveille? Nord J Psychiatry, 67:1-10.
10. https:/ppc..SGS.upenn.ed>perma-tion
11. Huppert, F. A. & S. O. T. C. (2013). Flourishing across Europe: Application of a New conceptual Framework for Defining Well-being. Social Indicators Research, 110, 837-861.https://doi.org/10.1007/s//205-011-9966-7
12. Jahoda, M. (1958). Current Concepts of Positive Mental Health. *New York, Basic Books Publisher*.
13. Lee, Dr. J, & Sigy, M. J. (2012). Consumer well-being (CWB): various conceptualizations and measures. In: Land, K.C, Michalos, A.C. and Sirgy, M.J. ,Eds., Handbook of social Indicators and Quality of Life Research, Springer, D or direct, 331-354. https://doi.org/10./007/978-84-007-24211-15
14. Magae, Liani, Scerri, Andy, James, Paul (2003). Reframing social sustainability reporting: Towards an engaged approach'. Development and sustainability, 15:225-243.
15. Michael Redelife (2005). "Sustainable Development (1987-2005): An Oxymoron Comes of Age". Sustainable Development (Submitted Manuscript) 13(4): 212-227.
16. Mick, D. G & Fournier, S. (1998) "paradoxes of Technologies: consumer cognizance , emotions and coping strategies" *Journal of consumer research, 25:123-147*.
17. Parasuraman, A. (2000)' "technology readiness index (TRI): a multiple- item scale to measure readiness to embrace new technologies "*Journal of service research* 2 (may), 307-320
18. Seligman, M. E. P. (2011). Flourish: A Visionary New Understanding of Happiness and well-being. Policy, 27, 60061-2004
19. Silvio Vielta (2013). A theory of global civilization: rationality and the irrational as the driving forces of history. Kindle Ebooks.
20. Vieira, H. C. (2018) Impact of the technical revolution on our well-being ISE blogs https://blogs .ise.ac.uk.
21. Wikipedia, (2005). Digital Revolution. "http://en.wikipediaorg/wki/digital revolution.
22. World Health Organization (1993). International statistical classification of diseases and related health problem with revision (ICD-10). Diagnostic criteria for Research Geneva , World Health Organization.