TECHNIUM
SOCIAL SCIENCES JOURNAL

Vol. 13, 2020

A new decade for social changes

www.techniumscience.com

ISSN 2668-7798

9 772668 779000

Promotion Analysis and Information Systems on Service Quality and Implications on Work Productivity

Evan Nugraha¹, Rini Mulyani Sari², Arif Yunan³

¹Assistant Professor Faculty of Industrial Engineering Muhammadiyah Bandung University, Indonesia, ²Lecturer Faculty of Business and Management Jenderal Ahmad Yani University, Indonesia, ³Lecturer Faculty of Industrial Engineering Muhammadiyah Bandung University, Indonesia.

noe.rievan@gmail.com¹, rini210283@gmail.com², aryunan11@gmail.com³

Abstract. The impact of advancement and data frameworks in supporting the improvement of an organization association will positively bring benefits. In the advancement of an organization, data frameworks will be aided request to improve the presentation of the organization. With superior it will have the option to keep up hierarchical responsibility. A solid responsibility will influence the administration nature of the organization. Administration quality is an extremely key issue for expanding consumer loyalty. The ramifications of administration quality will build the work profitability of the organization. From this wonder, research is completed utilizing special factors, data frameworks, administration quality and work efficiency with the object of exploration in an organization. This examination utilizes a quantitative methodology with informative exploration techniques. From the examination results, it is discovered that advancement (X1) and data frameworks (X2), administration quality (Y) and work efficiency (Z) have a huge impact.

Keywords. Explanatory research, promotion, information system, service quality, productivity

Introduction

A benefit arranged organization must have the option to stand out from general society. Right now the degree of rivalry keeps on expanding, so the organization must improve the organization's presentation to fabricate long haul associations with different clients or likely clients. Advancement and data frameworks to help the different needs and improvement of associations, people and organizations will surely bring something positive [1], [2], [3]. With the assistance of advancement and data, the organization's exhibition will improve [4], [5], [6]. With high advancement and data it will influence the nature of administration from the organization [7], [8], [9], [10]. Nature of administration is something that must be given and strived to by specialist organizations with great customers quality is an extremely key issue for expanding consumer loyalty [11], [12], [13]. Administration quality is an advertising movement that tries to encourage and encourage the conveyance of merchandise and ventures from makers to customers, so their utilization is as per what is required (type, amount, value, place, and when required) [14], [15]. Work efficiency affects buyer fulfillment, if work profitability is high, the dependability of shoppers will likewise be kept up, in light of the fact that buyers are happy

with the administrations given by the organization [16], [17], [18]. With an expansion in deals volume, the organization can be supposed to be winning in rivalry, since it can stand out for consumers to the items offered to them, this can't be isolated from how an organization does limited time exercises in its promoting upheld by a coordinated data framework that incorporates administration quality [19], [20].

Literature Review and Hypothesis Development

This analysis relies on previous research including: 1). Advancement influences benefit quality [21], [22], [23], [24], [25]; 2). Data frameworks influences benefit quality [26], [27], [28], [29], [30]; 3). Advancement and data frameworks influences benefit quality [29], [31], [32], [33], [34]; and 4). Benefit quality has suggestions for work efficiency [35], [36], [37], [38], [39].

Based on past investigate, the analysts conducted inquire about with special factors, data frameworks, benefit quality and work efficiency towards the protest of inquire about in a benefit company. From the preparatory inquire about, the taking after speculation was built:

Table 1. Research Hypothesis.

Style	Example and use
$H_0 : \rho_{xz_1} = \rho_{xz_2} = \rho_{yz} = 0$	There's no impact of advancement, data frameworks and benefit quality on work efficiency
H_a : There is at least one $\rho_{xz_i} \neq 0$; which $i = \rho_{xz_1}, \rho_{xz_2}, \rho_{yz}$	There's an impact of advancement, data frameworks and benefit quality on work efficiency

Research Method

This consider employments quantitative approach with illustrative investigate strategies. Information in a quantitative approach can be measured so merely can utilize insights in testing. The strategy of clarification is utilized to clarify the position of the factors beneath ponder and the relationship between one variable and another. The stages of processing and information examination can be seen within the taking after figure:

Figure 1: Thinking Framework

Populace is the full number of units of examination whose characteristics will be suspected as investigate subjects. The target populace of this think about are changeless workers at PT. Anugrah Dwi Mandiri, found in Tasikmalaya and PT. Multi Anugrah Satu, found in Bandung Rule. In deciding the examining fundamentally depends on the number of populace and the capacity to reach it, the examining strategy utilized by conveying surveys. This information examination procedure employments legitimacy test, unwavering quality test, typicality test, clear information examination, speculation testing and conclusion. The investigation procedure utilized is way examination which points to see the impact of the advancement variable (X1), data frameworks (X2), benefit quality (Y) and work efficiency (Z). there are 3 (three) instruments to test the exactness of the survey as an instrument for measuring respondents disc: 1). Legitimacy test; is the articulation thing within the ponder pronounced substantial in case

the relationship coefficient esteem is over 0,3 [40]; 2). Unwavering quality test is an instrument announced solid in the event that the esteem of the unwavering quality coefficient is at slightest 0,7; 3). Ordinariness test is as takes after: a). On the off chance that the importance esteem $> 0,05$, the information is defined as information that's ordinarily dispersed; b). On the off chance that the centrally esteem $< 0,05$, the information that are not ordinarily dispersed.

Typicality testing is gotten by utilizing the One Test Kolmogorov Smirnov test utilizing the SPSS application program. For the comes about of clear investigate, each variable displayed exceptionally terrible reactions (score 1), not great (score 2), great sufficient (score 3), great (score 4) and exceptionally great (score 5). How to calculate the length of the interim lesson = run : number of classes. Moreover, the portrayal clarifies the normal esteem for each variable prepared with a standard deviation esteem, the littlest to the most elevated run esteem, total; with data approximately the criteria for each variable concurring to the elucidation of the Likert scale. For the way investigation organize agreeing to [41] may be a strategy utilized to degree the coordinate relationship and circuitous relationship between factors. There are two stages within the way investigation, to be specific the arrange of calculating the way coefficient which comprises of the way coefficient show I and the way coefficient show II, the moment arrange is testing the speculation and conclusions. For information handling utilizing SPSS program.

Result and Discussion

In this think about, there were 30 male respondents (30%) and 70 female respondents (70%) from 2 districts, specifically the city of Bandung and Bandung rule. The characteristics of the 100 respondents examined in this think about comprised of sees based on sexual orientation, age, most recent instruction level, involvement, position, a long time of benefit, skill. The taking after are a few of the characteristics of this inquire about, among others: 1). Based on sexual orientation is the number of female respondents as much as 70% more than the number of male respondents by 30%. The company contended that female respondents were more persistent in terms of advancements. Another reason is that is more scrupulous and simple to mix with shoppers; 2). Based on instruction, respondents who graduated from tall school were 85% and respondents who graduated from S1 were 15%. The following arrange is to test information quality on three factors, to be specific advancement factors, data frameworks and benefit quality. The comes about of the information quality test can be seen within the taking after table:

Table 2. Research Hypothesis.

Item	Number of question	Validity test	Reliability test	Normality test
Promotion (X_1)	29	0,32	0,71	0,07
Information System (X_2)	27	0,33	0,76	0,06
Service Quality (Y)	25	0,36	0,78	0,08
Work Productivity (Z)	15	0,31	0,73	0,06
Reference Value		$> 0,30$	$\geq 0,70$	$> 0,05$
Statement		Valid	Reliable	Normal

Source: Questionnaire (2019)

The following arrange is graphic investigation inquire about. The outline of respondents recognitions approximately the variable advancement, data frameworks, benefit quality and

expanded efficiency, there are two stage of elucidation, specifically 1). Organize calculating the way coefficient and 2). The speculation testing organize is as takes after:

1. Calculate the path coefficient

- a. In line I, it is known that the importance esteem of the two factors, specifically $X_1 = 0,000$ and $X_2 = 0,000$ is littler than 0,05, meaning that X_1 and X_2 have a noteworthy impact on Y. The esteem of R square is 0,396, meaning that the commitment of the impact of X_1 and X_2 on Y is 39,7%, the remaining 60,3% is the commitment of other factors not included within the think about. The esteem of e_1 is $1 - 0,396 = 0,604$.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.648 ^a	.497	.396	3.83400

a. Predictors: (Constant), Information System, Promotion

b. Dependent Variable: Service Quality

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.845	3.994		2.206	.028
	Promotion	.461	.114	.312	4.041	.000
	Information System	.324	.094	.397	4.810	.000

a. Dependent Variable: Service Quality

Figure 2: Result of Model I Data Processing Using SPSS

- b. In way II, it is known that the noteworthiness esteem of the three factors, to be specific $X_1 = 0,025$ and $X_2 = 0,042$ and $Y = 0,000$ is littler than 0,05, meaning that the factors X_1 , X_2 and Y have a noteworthy impact in Z. The esteem of R square is 0,630, meaning that us appears the commitment of impact. X_1 and X_2 to Y produced to 62,9%, the remaining 37,1% was the commitment of other factors not included within the think about. The esteem of e_2 is $1 - 0,630 = 0,370$

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.803 ^a	.630	.615	3.31518

a. Predictors: (Constant), Service Quality, Information System, Promotion

b. Dependent Variable: Work Productivity

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.075	3.264		.636	.526
Promotion	.220	.097	.145	2.235	.025
Information System	.126	.054	.155	2.054	.042
Service Quality	.626	.075	.596	8.335	.000

a. Dependent Variable: Work Productivity

Figure 3: Result of Model II Data Processing Using SPSS

Figure 4: The Effect of Promotion and Information Systems on Service Quality and Its Implications on Work Productivity

Source: Research Result

From the picture over it can be clarified that: Commitment of the impact of advancement (X₁), data framework (X₂) has an impact on benefit quality (Y) and the suggestion for work efficiency is 0,596%. The remaining 0,404 is impacted by factors not examined in this think about, such as teach, remuneration, inventiveness and others.

2. Hypothesis test

At the theory testing arrange, it can be concluded that: 1). Examination of the impact of X₁ and Y; noteworthy esteem X₁ of 0,000 < 0,05, there's a critical impact of X₁ on Y; 2). Investigation of the impact of X₂ on Y; the critical esteem of X₂ is 0,000 < 0,05, there's a critical impact of X₂ on Y; 3). Examination of the impact X₁ on Z; noteworthy value of X₁ of 0,025 < 0,05, there's a noteworthy impact of X₁ on Z; 4). Examination of the impact of X₂ on Z; the noteworthy esteem of X₂ is 0,042 < 0,05, there's a noteworthy impact of X₂ on Z; 5). Examination of the impact of Y on Z; noteworthy esteem Y of 0,000 < 0,05, there's a noteworthy impact of Y on Z; 6). Investigation of the impact of X₁ through Y on Z; the coordinate impact of X₁ on Z is 0,145, the circuitous impact of X₁ through Y on Z is the increase of the beta esteem X₁ on Y with the beta esteem of Y on Z is the esteem of the

coordinate impact also the esteem of the circuitous impact ($0,145 + 0,185 = 0,330$). This implies that the esteem of the round about impact is more prominent than the esteem of the direct impact, it appears that in a roundabout way X_1 through Y encompasses a noteworthy impact in Z; 7). Examination of the impact of X_2 through Y on Z; the coordinate impact of X_2 on Z is 0,155, the roundabout impact of X_2 through Y on Z is the increase of the beta esteem of X_2 on Y with the beta esteem of Y on Z ($0,397 \times 0,596 = 0,236$). This implies that the esteem of the circuitous impact is more noteworthy than the esteem of the coordinate impact, it appears that in a roundabout way X_2 through Y encompasses a critical impact on Z.

From the comes about of this investigation, it can be concluded that the investigation of advancement, data frameworks on benefit quality and its suggestions for work efficiency includes a noteworthy impact.

Conclusion

Based on the comes about of the talk with respect to advancement investigation (X_1) and data frameworks (X_2) on benefit quality (Y) and its suggestions for work efficiency (Z), the analyst concludes that the speculation comes about are: 1). There's a noteworthy impact of advancement and data frameworks on benefit quality. In this case, the impact of data frameworks is more overwhelming on benefit quality; 2). The are coordinate and backhanded impacts on advancement (X_1) and data frameworks (X_2) on benefit quality (Y) and its suggestions for work efficiency (Z). In this case the indirect impact includes a greater effect than the coordinate impact. This implies that each inquire about variable includes a critical impact.

References

- [1] W. Z. Changhong Pei, *China's Outbound Foreign Direct Investment Promotion System*, Illustrate. Springer Berlin Heidelberg, 2016, 2016.
- [2] R. Nadda, Vipin, Dadwal, Sumesh, Rahimi, Ed., *Promotional Strategies and New Service Opportunities in Emerging Economies Advances in Marketing, Customer Relationship Management, and E-Services (2327-5502)*. IGI Global, 2017.
- [3] R. S. V. Maria Grazia Fugini, Piercarlo Maggiolini, *e-Government and Employment Services: A Case Study in Effectiveness*, Illustrate. Springer, 2015, 2015.
- [4] U. S. Panwar, Ed., *Handbook of Research on Promotional Strategies and Consumer Influence in the Service Sector Advances in Marketing, Customer Relationship Management, and E-Services (2327-5502)*. IGI Global, 2016.
- [5] M. W. Decision Sciences Institute, *Trends and Research in the Decision Sciences: Best Papers from the 2014 Annual Conference*. FT Press, 2014, 2014.
- [6] Yefim Kats, *Learning Management Systems and Instructional Design: Best Practices in Online Education*. Idea Group Inc (IGI), 2013, 2013.
- [7] Robert G. Picard, Ed., *Media Firms: Structures, Operations, and Performance*. Routledge, 2014.
- [8] F. G. C. William Winston, *Professional Services Marketing: Strategy and Tactics*. Routledge, 2013, 2013.
- [9] K. . A. S. Álvaro Rocha, Ana Maria Correia, Felix . B Tan, *New Perspectives in Information Systems and Technologies, Volume 1*. Springer Science & Business Media, 2014, 2014.
- [10] S. J. S. Brinkkemper, *Collaboration in Outsourcing: A Journey to Quality*, Illustrate.

- Springer, 2016, 2016.
- [11] Lewlyn L. R. Rodrigues, *Service Quality Measurement: Issues and Perspectives*. Anchor Academic Publishing (aap_verlag), 2013.
 - [12] Sharareh Mansouri Jajaei, *Service Quality, Customer Satisfaction and Loyalty*. Lap Lambert Academic Publishing GmbH KG, 2012.
 - [13] Amelikeh Confidence E. N., *The Concept of Service Quality in Commercial Practice*. Singapore: Partridge Publishing Singapore, 2020.
 - [14] Michael Kunas, *Implementing Service Quality based on ISO/IEC 20000: A management guide Industria y gestion empresarial*, Revised. IT Governance Publishing, 2012.
 - [15] J. K. Connie Mok, Beverley Sparks, *Service Quality Management in Hospitality, Tourism, and Leisure*. Routledge, 2013.
 - [16] Jochen Wirtz, *Service Quality and Productivity Management Volume 12 of Winning in service markets series*. World Scientific Publishing Company Pte Limited, 2017.
 - [17] C. L. Jochen Wirtz, *Services Marketing: People, Technology, Strategy (Eighth Edition)*. World Scientific Publishing Company Pte Limited, 2016.
 - [18] Margo Berman, *Productivity in Public and Nonprofit Organizations*, 2nd, illustr ed. Routledge, 2014.
 - [19] E. C. Ali Emrouznejad, Ed., *Managing Service Productivity: Using Frontier Efficiency Methodologies and Multicriteria Decision Making for Improving Service Performance Volume 215 of International Series in Operations Research & Management Science*, Illustrate. Springer, 2014.
 - [20] Bohdan W. Oppenheim, *Lean for Banks: Improving Quality, Productivity, and Morale in Financial Offices*, Illustrate. Productivity Press, 2020.
 - [21] N. F. Prianggoro and A. Sitio, "Effect of Service Quality and Promotion on Purchase Decisions and Their Implications on Customer Satisfaction," *Int. J. Eng. Technol. Manag. Res.*, vol. 6, no. 6, pp. 51–62, 2020, doi: 10.29121/ijetmr.v6.i6.2019.393.
 - [22] B. A. Fida, U. Ahmed, Y. Al-Balushi, and D. Singh, "Impact of Service Quality on Customer Loyalty and Customer Satisfaction in Islamic Banks in the Sultanate of Oman," *SAGE Open*, vol. 10, no. 2, 2020, doi: 10.1177/2158244020919517.
 - [23] C. I. Sianturi, E. S. Rini, and B. K. F. Sembiring, "The Influence of Service Quality and Promotion on Consumers' Repurchase Decision with Shopping Life Style as a Variable Moderating at Franchise Minimarket in Medan," *Int. J. Res. Rev.*, vol. 6, no. May, pp. 32–39, 2019.
 - [24] N. W. Masri, J. J. You, A. Ruangkanjanases, S. C. Chen, and C. I. Pan, "Assessing the effects of information system quality and relationship quality on continuance intention in e-tourism," *Int. J. Environ. Res. Public Health*, vol. 17, no. 1, 2020, doi: 10.3390/ijerph17010174.
 - [25] C. Mulya Firdausy and R. Idawati, "Effects of Service Quality, Price and Promotion on Customers' Purchase Decision of Traveloka Online Airline Tickets in Jakarta, Indonesia," *Int. J. Manag. Sci. Bus. Adm.*, vol. 3, no. 2, pp. 42–49, 2017, doi: 10.18775/ijmsba.1849-5664-5419.2014.32.1004.
 - [26] P. Y. Lenny and S. Kridanto, "Analysis of user acceptance, service quality, and customer satisfaction of hospital management information system," *J. Phys. Conf. Ser.*, vol. 1193, no. 1, 2019, doi: 10.1088/1742-6596/1193/1/012001.
 - [27] S. Michel and F. Cocula, "Impact of the Three IS Qualities On User Satisfaction in an Information-Intensive Sector," *Electron. J. Inf. Syst. Eval.*, vol. 20, no. 2, pp. 85–101, 2017, [Online]. Available:

- https://search.proquest.com/docview/1969780167?accountid=10218%0Ahttps://www.u-b.uni-koeln.de/openurl?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aa-biglobal&atitle=Impact+of+the+Three+IS+Qualities+On+User+Satis.
- [28] D. Abrego Almazán, Y. Sánchez Tovar, and J. M. Medina Quintero, "Influencia de los sistemas de información en los resultados organizacionales," *Contaduría y Adm.*, vol. 62, no. 2, pp. 321–338, 2017, doi: 10.1016/j.cya.2017.03.001.
 - [29] W. K. Putri and V. Pujani, "The influence of system quality, information quality, e-service quality and perceived value on Shopee consumer loyalty in Padang City," *Int. Technol. Manag. Rev.*, vol. 8, no. 1, p. 10, 2019, doi: 10.2991/itmr.b.190417.002.
 - [30] 宋争辉, "No Title专业外语有屁用," 信阳师范学院, vol. 10, no. 2, pp. 1–15, 2018.
 - [31] J. Jamaluddin and E. Ruswanti, "Impact of Service Quality and Customer Satisfaction on Customer Loyalty: A Case Study in a Private Hospital in Indonesia," *IOSR J. Bus. Manag.*, vol. 19, no. 05, pp. 23–33, 2017, doi: 10.9790/487x-1905012333.
 - [32] J. I. Manajemen and V. Vii, "THE INFLUENCE OF MARKETING MIX AND SERVICE QUALITY ON," vol. VII, no. 2, pp. 183–197, 2017.
 - [33] R. Chinomona and E. Chinomona, "The Influence of Information Quality , System Quality and Service Quality on Student ' s Self-Efficacy at Institutions of Higher Learning in South Africa The Influence of Information Quality , System Quality and Service Quality on Student ' s Self-Efficac," no. December, 2014, doi: 10.5901/mjss.2014.v5n27p974.
 - [34] . S., E. Andajani, and S. Rahayu, "The Effect of Service Quality to Customer of Loyalty Using Self-Service Technology: Internet Banking," *KnE Soc. Sci.*, vol. 9, no. 1, pp. 21–36, 2019, doi: 10.18502/kss.v3i26.5413.
 - [35] M. Maladi, N. Nirwanto, and A. Firdiansjah, "The Impact of Service Quality, Company Image and Switching Barrier on Customer Retention: Mediating Role of Customer Satisfaction," *Int. J. Appl. Bus. Int. Manag.*, vol. 4, no. 2, pp. 57–64, 2019, doi: 10.32535/ijabim.v4i2.567.
 - [36] I. G. N. Surahman, P. N. S. Yasa, and N. M. Wahyuni, "The Effect of Service Quality on Customer Loyalty Mediated by Customer Satisfaction in Tourism Villages in Badung Regency," *J. Ekon. Bisnis JAGADITHA*, vol. 7, no. 1, pp. 46–52, 2020, doi: 10.22225/jj.7.1.1626.46-52.
 - [37] A. Sao, S. Singh, S. Dixit, A. K. Pandey, and S. Singh, "Quality, productivity and customer satisfaction in service operations: An empirical study," *Int. J. Mech. Eng. Technol.*, vol. 8, no. 10, pp. 579–596, 2017.
 - [38] S. Kempa, N. Chandra Tanuwijaya, and Z. Jiwa Husada Tarigan, "The Impact of Supply Chain Collaboration in Logistic Service for Small Medium Enterprise in East Java, Indonesia," *KnE Life Sci.*, vol. 2020, no. 2018, pp. 207–216, 2020, doi: 10.18502/cls.v5i3.6573.
 - [39] L. Hillairet and C. Judge, "Generic spectral simplicity of polygons," *Proc. Am. Math. Soc.*, vol. 137, no. 06, pp. 2139–2145, 2009, doi: 10.1090/s0002-9939-09-09621-x.
 - [40] Sigmund Grønmo, *Social Research Methods: Qualitative, Quantitative and Mixed Methods Approaches*. SAGE Publications, 2019.
 - [41] Jonathan Sarwono, *Path Analysis: Data Analysis Application: Second Edition - Using IBM SPSS and Stata*. Amazon Digital Services LLC - Kdp Print Us, 2018.