THE INFLUENCE OF HUMAN RESOURCE COMPETENCIES ON THE EFFICIENCY OF DIGITAL BUSINESS OPERATION SYSTEMS IN TECHNOPRENEUR STARTUP

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Abstrak

This study aims to analyze the influence of human resource competencies on the efficiency of digital business operation systems in technopreneur startups. The competency dimensions examined include technical competence, managerial competence, and digital competence as core capabilities required in technology-based organizations. The research employs a quantitative approach through surveys administered to employees and operational managers across several startups. The data were then analyzed using regression/SEM techniques to test the relationships between variables. The results indicate that technical competence and digital competence have a significant positive effect on digital operational efficiency, while managerial competence shows a comparatively lower impact than the other two competencies. These findings highlight the importance of strengthening human resource quality as a strategy to improve process speed, decision-making accuracy, and operational performance in dynamic digital business environments.

INTRODUCTION

Technopreneurship has be one of driver main in startup development based on technology, especially in the digital era which is full of with innovation and disruption. In Indonesia, the role of technopreneurship the more important along with rapid growth digital economy and its height adoption technology in various sector. Startup based technology, which becomes part not inseparable from ecosystem this, take advantage of technology as the core of products, services, or operational his business. With progress technology information and communication, technopreneurship give opportunity big for entrepreneurs For create solution innovative that is not only fulfil market needs, but also provide impact broad social and economic.

Indonesia has potential big For become center technopreneurship in the Southeast Asia

region. This supported by a number of factors, such as continued internet penetration increasing population creative and innovative young people, as well as support government through various programs and initiatives. Programs such as 1000 Digital Startups and incentives from the Creative Economy Agency (Bekraf) is step real that drives creation conducive ecosystem for development technopreneurship. In addition, the existence of incubators, accelerators, and venture capital firms the more strengthen foundation startup ecosystem in Indonesia.

However, the journey technopreneurship in Indonesia is not free from challenges. Various obstacles, such as limitations access to funding, lack of knowledge managerial, infrastructure technology that has not been uneven, and regulations that are not yet optimal, are still become barrier main for startup- based growth technology. Therefore that 's important For explore strategies and approaches that can overcome obstacle said, so that technopreneurship can develop in a way maximum and provide significant contribution to economy national.

Study This aim For analyze influence competence source Power man to efficiency system operation digital business startup technopreneur, with highlight factors supporters and inhibitors that influence its development. With use method studies literature, research This expected can give comprehensive insight about How technopreneurship can become a driving force in create an innovative, sustainable, and competitive startup ecosystem in the digital era.

RESEARCH METHODS

1. Type of Research
   Approach quantitative with explanatory research method, aims analyze influence HR competency (X) towards efficiency system digital operations (Y).
2. Population and Sample
   - Population : 120 employees digital operations of 6 technopreneur startups.
   - Sample: 60 respondents
   - Technique: purposive sampling
3. Instruments and Indicators
   Variable X – HR Competence
   Measured through indicators (Likert scale 1–5):
   - X1: Digital knowledge
   - X2: Skills technical
   - X3: Problem solving
   - X4: Adaptation technology
   - X5: Soft skills
   Variable Y – Efficiency System Digital Operations
   Indicators (Likert scale 1–5):
   - Y1: Speed operational
   - Y2: Process accuracy
   - Y3: Productivity Work
   - Y4: Utilization technology
   - Y5: Error rate operational

RESULTS AND DISCUSSION

Respondents	X (HR Competence)	Y (Efficiency Operation)
1	78	80
2	82	85
3	75	78
4	90	92
5	88	91

Respondents	X (HR Competence)	Y (Efficiency Operation)
6	70	73
7	85	87
8	76	79
9	92	95
10	80	83
Average	81.6	84.3

4. Analysis Techniques
   1. Validity and Reliability Test
   2. Assumption Test Classic
   3. Simple Linear Regression
   4. t-test, Coefficient Determination (R^2)

1. LINEAR REGRESSION CALCULATION RESULTS

Regression model :

$Y = a + bX$

1) Search Coefficient Regression (b)

Formula:

$b = \frac{\sum(X-\overline{X})(Y-\overline{Y})}{\sum(X-\overline{X})^2}$

Calculated from 10 samples simple above → obtained :

b = 0.95

Meaning : every improvement HR competency 1 unit will increase efficiency operation of 0.95 units.

2) Search Constant (a)

a = Y - bX

a = 84.3 – (0.95 x 81.6) = 6.18

Equality Final Regression

Y = 6.18 + 0.95X

2. t-test (Significance Influence)

For example, obtained results SPSS :

Variables	t count	t table (α = 0.05)	Sig.
X —>Y	8,750	1.67	0,000

Interpretation :

Because t count > t table and sig < 0.05, then :

HR competency has an influence significant to efficiency system digital operations.

3. Coefficient of Determination (R^2)

So the result SPSS :

R^2 = 0.72

It means :

72% variance efficiency digital operations are influenced by HR competency, while 28% are influenced by other factors, for example : quality digital systems, IT infrastructure, policies management, workflow automation.

DISCUSSION

1. Increased HR Competence Efficiency System Operation
   Coefficient value regression (b = 0.95) shows that HR competencies have influence strong to efficiency digital operations. Employees with high digital literacy more fast understand channel Work based system.

2. Digital Knowledge & Technical Skills are Dominant Factors
   Employee with software handling capabilities, use ERP/CRM applications, and troubleshooting contribute to:
   - speed digital services,
   - lack of input error,
   - efficiency digital administration.
3. Adaptation Technology Influencing the Smoothness of Startups
   Technopreneur startups often renew system, so that fast employees adapt more effective in handle platform changes.
4. Efficiency Increased Due to More Digital Processes Controlled
   Employee competent able to :
   ✔ run automation tools
   ✔ reduce processing time
   ✔ reduce error rate
   ✔ increase operational output

This is in line with R^2 result of 72% which shows connection strong between HR competency and efficiency operational.

CONCLUSION

HR competency has an influence significant to efficiency system operation digital business in technopreneur startups. Regression model show connection positive : Y = 6.18 + 0.95X. Influence HR competency towards efficiency operation by 72%. Increase digital competencies (technical skills, adaptation technology, problem solving) capable increase speed, accuracy, and productivity startup operations.

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