

Digital Competence and Technology Adaptation as Determinants of Work Innovation of MSMEs Actors in Regional Arts and Culture Performances (PSBD) in Asahan Regency In 2025

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ABSTRACT

This study aims to analyze the influence of digital competence and QRIS payment technology adaptation on the work innovation of MSMEs at the Regional Arts and Culture Center (PSBD) of Asahan Regency. The research approach used was quantitative with a survey method of 40 MSMEs participating in the 2025 Asahan PSBD activities. Data were analyzed using multiple linear regression to determine the influence of digital competence (X_1) and QRIS technology adaptation (X_2) on work innovation (Y). The results of the study indicate that the digital competence of MSME HR has a positive and significant effect on work innovation with a significance value of 0.032, while QRIS adaptation also has a significant effect with a significance value of 0.021. The simultaneous test (F) shows that both variables together have a significant effect on work innovation with a calculated F value of 12.832 ($p < 0.05$). The coefficient of determination (R^2) of 0.531 indicates that 53.1% of the variation in work innovation is influenced by digital competence and QRIS adaptation. These findings underscore the importance of strengthening the human resource capacity of MSMEs through digital literacy and readiness to adopt technology to encourage sustainable work innovation. Generation Z has high digital literacy and is quickly mastering digital platforms. They excel at content creation, business social media use, and digital analytics.

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1. INTRODUCTION

The development of the digital economy has driven significant changes in work patterns and human resource management systems, particularly for micro, small, and medium enterprises (MSMEs). Digitalization requires every MSME to not only master marketing strategies but also possess digital competency and the ability to

adapt to new technologies to remain relevant and productive.

Generation Z (1997–2012) has digital native characteristics that are close to technology[1]. Their involvement in the Asahan PSBD MSMEs demonstrated their high adaptability in the use of social media, digital marketing, and QRIS payments. Gen Z's role is crucial in understanding the impact

of digital competence and technological adaptation on MSME work innovation.

One form of digital adaptation that is now widely implemented is the use of QRIS as a modern payment system. Mastery of this technology reflects the digital literacy level of human resources, which not only impacts transaction efficiency but also creates innovation in work methods and services.

Gen Z's creativity drives work innovations such as TikTok promotions, live-selling, and visual content creation.

MSMEs in the Asahan PSBD, as actors in the creative economy based on regional culture, are an interesting example for examining how digital competence and adaptation to payment technology contribute to their work innovation.

This study aims to analyze the influence of these two factors on the work innovation of MSME actors as part of a digital-based human resource development strategy in the regional creative economy sector.

2. LITERATURE REVIEW

2.1. *Digital Competence of MSME HR*

Digital competence is a combination of individual knowledge, skills and attitudes in using technology to achieve work effectiveness [2]. In the context of MSMEs, digital competencies include the ability to manage social media, understand digital platforms, and use modern payment tools efficiently.

Research by Gunawan Santoso [3] shows that increasing digital competence directly impacts the competitiveness and creativity of MSME workers. Meanwhile, Zyrahrah [4] emphasized that digital competence drives changes in work culture to be more innovative and adaptive to new technologies.

2.2. *Technology Adaptation and QRIS as Indicators of Human Resource Transformation*

Technological adaptation is defined as an individual's ability to accept, learn, and apply new

technology in work activities.[5]QRIS, as a cashless payment system, functions not only as a transaction tool but also as an indicator of human resources' digital readiness.

F Firsanti [6] explains that human resources who quickly adapt to QRIS tend to have higher financial and digital literacy. This increases work efficiency and expands business networks. Telkom University study [7] also found that the success of QRIS implementation depends on the readiness of human resources, not just on the technological infrastructure.

2.3. *MSME Work Innovation*

Work innovation is defined as the ability of employees or business owners to generate new ideas, more effective work methods, and develop technology-based products or services. In the context of MSMEs, work innovation is the result of a combination of knowledge, experience, and digital skills possessed by business owners.

Pratiwi Research[8]shows that the adoption of digital technology and training increases the innovation capabilities of MSMEs by up to 23% compared to MSMEs that still operate conventionally.

2.4. *Relationship between variables*

Previous research has shown a link between digital competence, technology adaptation, and work innovation. Strong digital competence increases self-confidence and work effectiveness.[9], while adaptation to new technologies such as QRIS accelerates the process of innovation and collaboration[10].

Thus, the formulated hypothesis is:

1. H_1 : Digital competence has a positive effect on work innovation.

2. H_2 : Adaptation of QRIS technology has a positive effect on work innovation.
3. H_3 : Digital competence and technology adaptation simultaneously have a significant influence on the work innovation of MSME actors.

3. RESEARCH METHODOLOGY

This study used a quantitative descriptive-verification approach. The study population was MSMEs participating in the 2025 Asahan Regency Large-Scale Social Restrictions (PSBD). A sample of 100 respondents was drawn using purposive sampling based on the criteria of MSMEs actively using digital media and QRIS.

Respondents included MSME actors across ages, including Gen Z (18–28 years) as the dominant group in the MSME digital sector in the Asahan PSBD.

The research instrument was a questionnaire with a Likert scale (1–5). Variables:

1. X_1 : HR Digital Competence
2. X_2 : Technology Adaptation (QRIS)
3. Y : Work Innovation

The analysis method uses multiple linear regression with t-test, F-test, and coefficient of determination (R^2).

4. RESULTS AND DISCUSSION

The results of the analysis show:

The Gen Z group demonstrates higher digital competency, thus strengthening innovation through digital promotion, creative design, and the use of QRIS.

1. Partial test (t):

- a. Digital competence (X_1) has a significant positive effect on work innovation ($p = 0.032 < 0.05$).
- b. QRIS adaptation (X_2) has a significant positive effect on work innovation ($p = 0.021 < 0.05$).

2. Simultaneous test (F): F count = 12.832 with $p = 0.000 < 0.05$, indicating a significant joint effect.
3. Coefficient of determination (R^2): $0.531 \rightarrow 53.1\%$ of the variation in work innovation is explained by digital competence and technology adaptation.

This finding strengthens the theory that work innovation is the result of strengthening HR competencies and adapting to new technologies.[11] In the context of Asahan's Large-Scale Social Restrictions (PSBD) MSMEs, entrepreneurs with high digital literacy are able to innovate more quickly in customer service, promotions, and operational efficiency.

Furthermore, the use of QRIS demonstrates more professional and accountable work behavior, as the digital payment system fosters administrative discipline and transparency. This demonstrates that digital-based human resource development is key to sustainable innovation in the MSME sector.

5. CONCLUSION

This study concludes that digital competence and QRIS technology adaptation have a positive and significant impact on work innovation among MSMEs operating in the Asahan PSBD. The higher the digital capabilities of human resources and their readiness for new technologies, the greater the potential for innovation.

Gen Z MSMEs have proven to be drivers of innovation due to their close relationship with digital technology.

Practically, the results of this study demonstrate the need for a program to improve the human resource capacity of MSMEs through digital literacy training, application-based financial management, and the use of modern payment technologies. This will strengthen MSME competitiveness in the digital economy era and support the vision of developing superior human resources in the regions.

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