

## The mediating effect of innovative behavior on supply chain performance of water supply companies

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### ABSTRACT

#### Article history:

Received June 26, 2024

Received in revised format July 28, 2024

Accepted October 3 2024

Available online

October 8 2024

#### Keywords:

Emotional Intelligence

Intellectual Intelligence

Innovative Behavior

Supply Chain Performance

This research investigates the mediating effect of Innovative Behavior on the relationship between Emotional Intelligence, Intellectual Intelligence, and supply chain performance. Data were collected from 198 employees of water supply companies across five major cities in Central Java, using purposive sampling and analyzed through structural equation modeling. The findings indicate that both Emotional Intelligence and Intellectual Intelligence positively and significantly impact supply chain performance. Additionally, Innovative Behavior not only positively influences supply chain performance but also mediates the relationship between Emotional and Intellectual Intelligence with supply chain performance. The study suggests that enhancing Emotional and Intellectual Intelligence through Innovative Behavior can significantly improve supply chain performance in water supply companies. Organizations are recommended to incorporate Emotional Intelligence into selection and training programs, develop initiatives to boost Emotional and Intellectual Intelligence through training in areas such as emotional management, interpersonal communication, problem-solving, critical thinking, and creativity, and create a supportive work environment that encourages innovative behavior. Implementing these strategies can lead to more efficient operations, better resource management, and increased customer satisfaction, thereby enhancing overall supply chain performance.

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### 1. Introduction

Supply chain performance is very important for the progress of an organization. Good supply chain performance will increase the productivity and effectiveness of the organization in achieving its goals (Rivai, 2013). One aspect believed to impact supply chain performance is emotional intelligence. (Muduli et al., 2016). Emotional intelligence pertains to an individual's capacity to identify their own and others' emotions, self-motivate, and effectively manage emotions within interpersonal relationships (Goleman, 2020). Numerous prior investigations have demonstrated a favorable impact of emotional intelligence on supply chain performance (Higgs, 2004; Phan, 2005; Alavi et al., 2013; Rasiah et al., 2019). In addition to emotional intelligence, another factor believed to affect supply chain performance is intellectual intelligence. Intellectual intelligence (Muduli et al., 2016) denotes an individual's cognitive prowess and problem-solving skills, as well as their ability to adapt to various situations. Various studies have also indicated a positive correlation between intellectual intelligence and supply chain performance (Nambudiri, 2012).

Although emotional intelligence and intellectual intelligence influence supply chain performance, several studies show that this influence is not always direct, but is mediated by other factors such as job satisfaction, organizational commitment, or innovative behavior (Alavi et al., 2013; Muduli et al., 2016). Innovative behavior is characterized as the individual's actions directed towards the introduction and implementation of novel approaches within the organizational setting (Janssen, 2000).

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ISSN 2371-8374 (Online) - ISSN 2371-8366 (Print)

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doi: 10.5267/j.jpm.2024.10.005

Numerous research studies have indicated that the innovative behavior exhibited by employees may serve as a mediator in the relationship between emotional intelligence and supply chain performance (Alavi et al., 2013; Muduli et al., 2016). It is believed that individuals with high emotional intelligence possess enhanced abilities in managing positive emotions, such as enthusiasm and optimism, thereby fostering.

Apart from that, employees with good emotional intelligence are more sensitive to the psychological needs of co-workers and the organization, so they are motivated to behave innovatively for the common good. This innovative behavior ultimately improves individual and supply chain performance. Innovative behavior is thought to also mediate the relationship between intellectual intelligence and supply chain performance (Muduli, 2016). Employees with high intellectual intelligence have good cognitive abilities in solving problems and generating new ideas. This creative thinking ability encourages the emergence of innovative behavior, which in turn improves performance. However, based on a search of literature studies, several studies on the influence of Emotional Intelligence and intellectual intelligence supply chain performance show inconsistencies in research results. Research conducted by Côté & Miners (2006); Day & Carroll (2008), found that emotional intelligence had no significant effect or even had a negative effect on supply chain performance. On the other hand, research conducted by Vinchur et al. (1998); Salgado et al. (2003); Rode et al. (2017) show that intellectual intelligence has no significant effect on supply chain performance. The research articles present empirical findings in various organizational and work contexts.

Although several previous studies have investigated the mediating role of innovative behavior in the relationship between emotional and intellectual intelligence and supply chain performance, research in the context of water supply companies in Indonesia is still very limited. As a public service provider company, water supply companies are required to continue to innovate and improve the quality of services to the community. Therefore, research on water supply companies is important to understand the factors that can increase innovative behavior and supply chain performance. It is widely accepted that individuals with elevated emotional intelligence are more adept at regulating positive emotions, such as enthusiasm and optimism, which in turn cultivates a work atmosphere conducive to innovative behaviors. The research was conducted on employees of water supply companies in 5 large cities in Central Java, namely Semarang, Surakarta, Purwokerto, Tegal and Pekalongan.

## **2. Literature Review and Hypothesis**

### *2.1. Emotional Intelligence, innovative behavior and supply chain performance*

Emotional Intelligence (EI) pertains to an individual's capacity for identifying, comprehending, regulating, and efficiently employing emotions in oneself and others, as posited (Salovey & Mayer, 1990). The prominence of this concept has surged in recent decades within both academic and business realms, owing to its perceived substantial impact on personal and organizational triumph. While various models and interpretations of EI have been put forth, the most influential one remains the EI ability model introduced by (Salovey & Mayer, 1990). This model delineates EI into four core dimensions: 1) Emotion Perception, which entails the accurate identification and recognition of emotions in oneself and others, 2) Use of Emotions, which involves leveraging emotions to enhance cognitive functions like problem-solving, reasoning, and decision-making, 3) Understanding Emotions, exemplifying the capacity to comprehend the origins, outcomes, and shifts in emotions, and 4) Emotion Management, which refers to the efficient regulation of emotions in oneself and others, as delineated (Mayer et al., 2016). A review of existing literature indicates that Emotional Intelligence (EI) offers various advantages within organizational settings. Those individuals possessing elevated levels of EI demonstrate enhanced performance, adeptness in stress management, and proficiency in fostering interpersonal connections (O'Boyle et al., 2011). Moreover, EI exhibits associations with proficient leadership, job contentment, and accomplishment in one's career trajectory (Côté & Miners, 2006). Furthermore, empirical evidence suggests a positive correlation between EI and the display of innovative behaviors in professional environments (Jiang et al., 2017). Individuals with heightened EI capabilities display superior abilities in handling adverse emotions, receptiveness to novel concepts, and adeptness in cultivating relationships with colleagues, all of which contribute to fostering innovation. Nevertheless, there is an ongoing discussion surrounding the suitable delineation and evaluation of Emotional Intelligence (EI). Certain skeptics posit that EI shares commonalities with various concepts like personality and overall cognitive ability (Locke & Latham, 2019). Nonetheless, there is persistent empirical data indicating that EI plays a distinctive role in yielding numerous favorable results within the organizational setting, regardless of variables like personality and overall cognitiveability (O'Boyle et al., 2011).

Individuals can enhance their Emotional Intelligence (EI) through engaging in training sessions and interventions aimed at enhancing emotional awareness, emotional regulation, and social competencies (Hodzic et al., 2018). Moreover, organizations can enhance EI by recruiting and nurturing individuals with elevated EI levels and fostering work environments that encourage the acknowledgment and utilization of emotions. Apart from the personal and organizational advantages, EI holds significance in the realm of education as students with heightened EI levels demonstrate superior academic performance, increased motivation, and healthier relationships with peers and educators (Perera & DiGiacomo, 2013). Consequently, numerous educational institutions have integrated initiatives and courses focusing on EI development into their academic curricula. Emotional Intelligence (EI) can influence a person's innovative behavior. Several studies have shown are lationship

between EI and innovative behavior. Emotional intelligence helps individuals manage emotions and stress better, so they can think more clearly and creatively in facing new challenges and opportunities (Rego et al., 2012). Individuals with elevated levels of emotional intelligence (EQ) demonstrate a capacity for comprehending the emotions of others, enabling them to cultivate more effective and cooperative relationships with their peers, consequently fostering a culture of innovation (Shaffer & Shaffer, 2005). The possession of emotional intelligence empowers individuals to grasp and manage adverse emotions like anxiety and fear of failure, thereby emboldening them to take risks and explore novel concepts (Zhou & George, 2003). Components of EQ, such as self-motivation, empathy, and adept social skills, play a pivotal role in nurturing creativity and innovation by enabling individuals to self-motivate, empathize with others' needs, and establish supportive social connections conducive to innovation. Moving forward, additional research is imperative to enhance our comprehension of Emotional Intelligence, encompassing the influencers of its development, the underlying neurological mechanisms, and the efficacy of EI training initiatives across diverse cultural and organizational settings. With a more comprehensive understanding, we can harness the potential of EI more effectively to improve individual and supply chain performance.

**H<sub>1</sub>:** *Emotional Intelligence has a positive and significant influence on innovative behavior.*

**H<sub>2</sub>:** *Emotional Intelligence has a positive and significant influence supply chain performance.*

## 2.2. Intellectual intelligence, innovative behavior and supply chain performance

Intellectual Intelligence (IQ) pertains to an individual's overall cognitive capacities, encompassing the capacity for comprehension, logical reasoning, learning, problem-solving, and abstract thinking (Gottfredson, 1997). The construct of IQ holds considerable influence within the realm of psychology, often being viewed as a vital predictor of achievement in academic pursuits, professional endeavors, and broader life accomplishments. One of the most prominent models of IQ is the framework established by psychologist David Wechsler, which categorizes IQ into distinct components such as verbal comprehension, perceptual reasoning, working memory, and processing speed (Wechsler, 2008). This particular framework has provided the basis for numerous standardized IQ evaluations, including the Wechsler Adult Intelligence Scale (WAIS) and the Wechsler Intelligence Scale for Children (WISC).

Prior investigations have demonstrated a positive association between IQ and various favorable outcomes within the professional domain, including job performance, earnings, and career progression (Kuncel et al., 2004). Individuals with elevated IQ scores typically exhibit greater success in vocations demanding robust cognitive capacities, such as roles in the professional, managerial, and technical spheres. Moreover, IQ has also been correlated with innovative tendencies in work settings. Those with higher IQ levels often display enhanced aptitude in recognizing opportunities, formulating fresh concepts, and creatively resolving challenges (Neubauer & Freudenthaler, 2005; Batey, 2006). While IQ is acknowledged as a pivotal determinant of scholastic and professional achievements, deliberations persist regarding the precise impact of IQ on an individual's life accomplishments. Some scholars posit that IQ offers a restricted assessment of one's capabilities, advocating for the significance of supplementary elements like emotional intelligence, persistence, and environmental influences (Sternberg, 2003; Dweck, 2006). Conversely, disputes arise concerning whether IQ authentically gauges "intelligence" or merely specific academic proficiencies, as well as the potential presence of cultural biases in conventional IQ assessments. These discussions have spurred the emergence of alternative intelligence frameworks, exemplified by Howard Gardner's (2012) theory of multiple intelligences.

While IQ has gained significant influence, a burgeoning discourse exists on the extent to which IQ shapes an individual's achievements in life. Some researchers argue that IQ only provides a limited picture of a person's potential and that other factors such as emotional intelligence, perseverance, motivation, and environment also play an important role in achieving success (Sternberg, 2003; Dweck, 2006). Although IQ has gained significant prominence, there is a burgeoning discourse surrounding the extent to which IQ genuinely influences an individual's achievements. Within this framework, Gardner (2012) theory of multiple intelligences has garnered considerable interest. This proposition posits the existence of eight distinct forms of intelligence, encompassing linguistic, logical-mathematical, spatial, kinesthetic, musical, interpersonal, intrapersonal, and naturalistic intelligence. Gardner asserts that each person possesses a unique amalgamation of proficiencies and deficiencies across these diverse intelligence domains. In the realm of organizations, while IQ has demonstrated its efficacy as a reliable forecaster of occupational performance, particularly in roles demanding heightened cognitive capacities, supplementary elements like temperament, drive, and interpersonal capabilities hold substantial significance as well (Kuncel et al., 2004). Consequently, contemporary organizations adopt a more holistic approach in the recruitment and advancement processes, considering a spectrum of factors such as IQ, emotional intelligence, personality traits, and other competencies. In the future, additional research is required to enhance comprehension of the correlation between IQ and various factors like personality, motivation, and key outcomes such as academic achievement, professional success, and overall well-being. Through a more holistic understanding, the utilization of IQ and other dimensions of cognitive abilities can be optimized to support individuals and organizations in realizing their full potential.

**H<sub>3</sub>:** *Intellectual Intelligence exerts a favorable and noteworthy impact on behavior Innovation.*

**H<sub>4</sub>:** *Intellectual Intelligence demonstrates a favorable and noteworthy effect supply chain performance.*

### 2.3. *Innovative Behavior and supply chain performance*

Innovative behavior pertains to a sequence of activities and behaviors carried out by individuals or groups with the purpose of creating, introducing, and implementing novel concepts, processes, products, or procedures that are intended to bring advantages to the organization (Janssen, 2000; Kleysen & Street, 2001). These activities encompass the steps involved in recognizing opportunities, creating fresh ideas, garnering support, and implementing those ideas. The significance of innovative behavior is widely acknowledged for the prosperity and competitiveness of organizations in the contemporary era characterized by globalization and rapid technological advancements. Organizations that can stimulate and support innovative behavior among their staff are more likely to enhance their adaptability, innovate new products or services, and boost their operational efficiency and productivity (Kheng et al., 2013).

One personal trait that has been extensively studied concerning innovative behavior is emotional intelligence (EI). Numerous research endeavors have indicated that individuals with elevated EI levels demonstrate superior abilities in handling adverse emotions, exhibit receptiveness to novel ideas, and excel in heightened IQ levels tend to excel in identifying opportunities, generating fresh ideas, and tackling challenges in a creative manner Batey (2006) fostering connections with colleagues, all of which bolster innovative behavior (Nurzaman & Amalia, 2022). Furthermore, cognitive intelligence (IQ) has also been associated with innovative behavior. Individua Apart from individual characteristics, organizational factors also greatly influence innovative behavior. An organizational climate that supports creativity, autonomy, risk taking, and information exchange can facilitate innovative behavior (Kheng et al., 2013). A leadership approach characterized by active participation and encouragement of innovation has demonstrated an ability to impact employees' propensity for innovation (Bai et al., 2022). Hence, it is imperative for organizations to establish a conducive atmosphere that encourages and acknowledges inventive conduct, alongside offering pertinent training and skill enhancement for their workforce. Organizations must also take into account variables like incentive schemes, allocation of resources, and the structure of the organization that may either facilitate or impede innovative behavior (Sethibe & Steyn, 2016).

Although innovative behavior is often considered positive and desirable, it is important to remember that not all innovation is always successful or beneficial to the organization. Sometimes, innovations that fail or do not match organizational or market needs can lead to losses and waste of resources (Janssen et al., 2004). Therefore, organizations need to have a mechanism to evaluate and select innovative ideas that have the potential to provide real benefits. Apart from that, innovative behavior also needs to be managed and integrated well into organizational operations so that it can provide optimal impact. Innovations that are not implemented properly or are not aligned with the organization's strategy and business processes can cause inefficiencies and even disrupt overall supply chain performance. Based on this description, the research hypothesis is proposed:

**H<sub>5</sub>:** *Innovative Behavior has a positive and significant effect supply chain performance.*

**H<sub>6</sub>:** *Innovative Behavior can mediate the relationship between Emotional Intelligence and Performance*

**H<sub>7</sub>:** *Innovative Behavior can mediate the relationship between Intellectual Intelligence and Performance*

### 3. Research Method

The research was carried out in the period July to December 2023. The total research sample was 250 respondents consisting of employees of water supply companies in the cities of Semarang, Surakarta, Purwokerto, Tegal and Pemasang. The sampling technique is purposive sampling. Of the 250 questionnaires distributed, 210 were returned for a response rate of 84%. After evaluation, only 198 respondents' data met the requirements for statistical analysis. In terms of gender, 60% of respondents were men and 40% women. Respondents are in the age category between 30 - 50 years and have work experience as lecturers between 5 - 25 years. To measure the Innovative Behavior variable, indicators include opportunity exploration, idea generation, campaign supporting the idea, idea application, and value evaluation. The Emotional Intelligence variable is assessed using indicators such as self-awareness, self-regulation, motivation, empathy, and social skills. To gauge Intellectual Intelligence, indicators like verbal ability, numerical ability, logical reasoning, memory, and information processing speed are utilized. Performance is measured through indicators including supply chain performance targets, discipline, work initiative, collaboration, and integrity.

**Table 1**

Respondent Demographics (n = 198)

Variable	Information	Mean	Standard Deviation
Age	Year	38.751	5.857
Work experience	Year	14.215	4.674
Marital status	0 =Not married 1 = Married	0.98 1	0.443
Innovative Behavior	5 items	23.315	4.591
Emotional Intelligence	5 items	24.102	4.019
Intellectual Intelligence	5 items	23.586	5.019
Performance	5 Items	24.202	4.023

Source: Primary data processed (2023)

The reliability test results show that all construct reliability values are greater than 0.7. This shows that all research constructs have reliable status.

Table 2  
Data Reliability Test

Variable	Std. Loading	Standard Error	Reliability
Innovative Behavior	4.018	1.125	0.781
Emotional Intelligence	4.161	0.898	0.718
Intellectual Intelligence	3.698	1.974	0.826
Performance	3.295	1.643	0.745

Source: Primary data processed (2023)

Model testing was carried out using Structural Equation Modeling (SEM) with a two steps approach. The results of the Feasibility Testing Index calculation, presented in Table 3, show that the measurement results have met the goodness-of-fit criteria, which means the model in this study is acceptable.

Table 3  
Structural Equation Modeling Feasibility Testing Index

No	Goodness of fit index	Cut of value	Analysis Results	Model evaluation
1	$\chi^2$ - Chi-Square	< 108.78	98.29	Good
2	Significance Probability	0.05	0.063	Good
3	CMIN/DF	2.00	1,986	Good
4	GFI	0.90	0.891	Marginal
5	AGFI	0.90	0.867	Marginal
6	TLI	0.95	0.893	Marginal
7	CFI	0.95	0.960	Good
8	RMSEA	0.08	0.078	Good

Source: Primary data processed (2023)

#### 4. Research Results

Each hypothesis is tested by comparing the Critical Ratio (CR) value and the t-table value at a certain degree of freedom (df). If the CR value is greater than the t-table value at a certain df then the relationship between the variables being tested can be declared significant at a certain level of probability. Apart from that, it is also seen from the probability level that if  $p < 0.05$  the null hypothesis is rejected, and if  $p > 0.05$  the null hypothesis is accepted. The test results of the five proposed hypotheses are presented in Table 4.

Table 4  
Regression Weight Standardized Structural Equation Model

	Estimate	S. E	CR	P	Confirmation
Innovative behavior ← Emotional Intelligence	0.625	0.54	4,314	0.029	significant
Innovative behavior ← Intellectual Intelligence	0.564	0.48	3,762	***	significant
SC Performance ← Emotional Intelligence	0.459	0.58	4,216	0.037	significant
SC Performance ← Intellectual Intelligence	0.413	0.68	4,473	***	significant
SC Performance ← Innovative Behavior	0.781	0.75	5,416	***	significant

Source: Primary data processed (2022)

The testing results of the first hypothesis stating that emotional Intelligence has a significant positive effect on Innovative behavior, is accepted. This can be seen from the Critical Ratio (CR) value of 4.314 which shows a higher value than the t-table value of 1,972. at a probability level of  $0.029 < 0.05$  with a beta value of 0.625. Based on the results of this analysis, it means accepting the first hypothesis which states that Emotional Intelligence has a significant positive effect on Innovative behavior and rejecting the null hypothesis. These results show that the Emotional Intelligence variable can improve Innovative behavior employees of water supply companies in Central Java.

The testing results of the second hypothesis stating that Intellectual Intelligence has a significant positive effect on Innovative behavior, is accepted. Judging from the Critical Ratio (CR) value of 3.762, it shows a higher value than the t-table value of 1.972 at a probability level of  $0.00 < 0.05$  with a beta value of 0.564. The results of this analysis show variables Intellectual Intelligence can improve Innovative behavior employees of water supply companies in Central Java.

The testing results of the third hypothesis stating that Emotional Intelligence has a significant positive effect supply chain performance, is accepted. This can be seen from the Critical Ratio (CR) value of 4.216, which shows a higher value than the t-table value of 1,972. at a probability level of  $0.037 < 0.05$  with a beta value of 0.459. Based on the results of this analysis, it means accepting the third hypothesis which states that Emotional Intelligence has a significant positive effect on supply chain performance and rejecting the null hypothesis. These results show that the Emotional Intelligence variable can improve performance of employees of water supply companies in Central Java.

The testing results of the fourth hypothesis stating that Intellectual Intelligence has a significant positive effect supply chain performance, accepted. Judging from the Critical Ratio (CR) value of 4.473, it shows a higher value than the t-table value of 1.972 at a probability level of  $0,000 < 0.05$  with a beta value of 0.413. The results of this analysis show. Variable Intellectual Intelligence can improve performance employees of water supply companies in Central Java.

The testing results of the fifth hypothesis stating that Innovative Behavior has a significant positive effect on supply chain performance, is accepted. This can be seen from the Critical Ratio (CR) value of 5.416 which shows a higher value than the t-table value of 1,972.at a probability level of  $0, 000 < 0.05$  with a beta value of 0.781. Based on the results of this analysis, it means accepting the fifth hypothesis which states that Innovative Behavior has a significant positive effect on supply chain performance and rejecting the null hypothesis. These results show that innovative behavior variables can improve performance for employees of water supply companies in Central Java.

To test whether the Innovative Behavior variable is able to act as a mediator in the relationship Emotional Intelligence and Intellectual Intelligence with Performance, using the Path Analysis method, the results of which are presented in Table 5.

**Table 5**  
Direct and Indirect Effects

Variables	Estimation
Performance ← Emotional Intelligence	0.459
Performance ← Intellectual Intelligence	0.413
Innovative Behavior ← Emotional Intelligence	0.625
Performance ← Innovative Behavior	0.781
Performance ← Innovative Behavior ← Emotional Intelligence	0.488
Innovative Behavior ← Intellectual Intelligence	0.564
Performance ← Innovative Behavior ← Intellectual Intelligence	0.440

Source: Processed Primary Data (2023)

The results of the path analysis in Table 5 reveal that the direct influence of Emotional Intelligence supply chain performance is 0.459, which is smaller than the indirect influence, namely through the innovative behavior variable, which is 0.488. Thus, it can be concluded that innovative behavior can act as a mediating variable and strengthen the relationship between Emotional Intelligence and supply chain performance of water supply companies in Central Java. The results of the path analysis of the direct influence of the Intellectual Intelligence variable on supply chain performance are 0.413, smaller than the indirect influence, namely through Innovative Behavior supply chain performance of 0.440. Based on these results, it can be concluded that Innovative Behavior can act as a mediating variable and strengthen the relationship Intellectual Intelligence with supply chain performance.

## 5. Discussion

Regarding the verification of the initial hypothesis, specifically the assertion that Emotional Intelligence (EI) exerts a beneficial impact on innovative conduct, it follows that as the level of Emotional Intelligence escalates, so does the innovative behavior demonstrated by employees at water supply companies in Central Java. This association is comprehensible due to the fundamental nature of Emotional Intelligence, defined as an individual's capacity to identify, comprehend, regulate, and communicate emotions proficiently. Consequently, Emotional Intelligence holds significant importance concerning the personal and professional spheres of individuals employed by a water utility company, where the demanding nature of their daily tasks necessitates adept decision-making abilities to swiftly address the multitude of issues that arise. The outcomes of this investigation align with the findings of Jiang et al. (2017), who asserted that individuals possessing elevated EI levels typically exhibit heightened self-efficacy and a more positive emotional state, thereby fostering their engagement in innovative practices. In addition, the positive influence of EI on innovative behavior is stronger when individuals have a high learning goal orientation. The findings of this research also highlight the importance of EI in encouraging innovative behavior and suggest that organizations consider EI in their selection and training programs to encourage an innovative workforce.

Organizations can enhance emotional intelligence through the provision of training and development programs focusing on emotional management, interpersonal communication, empathy, and self-awareness. Additionally, they have the opportunity to advocate for activities like meditation, mentoring, and 360-degree feedback. The enhancement of emotional intelligence within employees can play a pivotal role in fostering innovative behavior. Rivai (2013) states that emotional intelligence encompasses the capacity to comprehend and appropriately address the emotions of others. This heightened level of empathy can lead to a greater awareness of the needs and viewpoints of various stakeholders, including customers and colleagues, potentially paving the way for novel solutions and concepts. Muduli et al. (2016), individuals possessing a high level of emotional intelligence exhibit proficiency in recognizing and regulating their own emotions. Effectively managing stress and mitigating negative emotions like anxiety or frustration can contribute to employees maintaining focus, composure, and receptiveness to creative ideation. Goleman (2020), emotional intelligence also encompasses self-motivation and the resilience to rebound from setbacks. When faced with a difficult challenge or project, employees with strong self-motivation are more likely to persevere and continue to look for innovative solutions. Higgs (2004) Emotional intelligence encompasses

interpersonal competencies such as proficient communication, the capacity to establish connections, and expertise in conflict resolution. These competencies play a crucial role in fostering successful partnerships, where diverse viewpoints and concepts can be freely shared Rasiah et al. (2019). By gaining insight into their own strengths, weaknesses, and cognitive tendencies, individuals with elevated emotional intelligence can become more receptive to self-enhancement and embracing alternative perspectives, thereby igniting creativity. Through the enhancement of emotional intelligence, employees will be more adept at thinking creatively, collaborating efficiently, and generating innovative solutions that address broader requirements and viewpoints

Proving the second hypothesis, Intellectual Intelligence has a significant positive effect on Innovative behavior. This result implies a higher degree Intellectual Intelligence will continue to increase Innovative behavior employees of water supply companies in Central Java. The results of this study are in line with research Newman (2019) who conducted a constructive replication of two studies. examined the role of intellectual acumen in encouraging innovative behavior in organizational settings Study 1 utilized a multi-source field study of 233 employees and their supervisors from various organizations. The results showed that employees' intellectual intelligence, as assessed by their superiors, was positively related to their innovative behavior, as assessed by their superiors and coworkers. Study 2 extends these findings through an experimental study of policy making involving 254 working professionals. Participants make innovative behavioral assessments based on hypothetical employee profiles that systematically vary in level of intellectual quotient and other individual characteristics. The results again show that intellectual intelligence is a significant positive predictor of innovative behavior assessments. Overall, these two studies provide constructive replication evidence that intellectual acumen is an important antecedent of innovative behavior in the workplace. Theoretical and practical implications for driving innovation in organizations.

The outcomes of the statistical examination, which validate the third hypothesis, indicate that Emotional Intelligence exerts a noteworthy positive impact supply chain performance. This means that the higher the degree of Emotional Intelligence that employees have, the better the performance of Regional. Water supply Company employees in Central Java. These results support the research. The outcomes of the statistical analysis conducted for the fourth hypothesis indicate that Intelligence exerts a notable positive impact on job performance. This suggests that as the level of Intellectual Intelligence among employees increases, so does the performance of the employees at water supply companies in Central Java.

The results of this study support research result found that there was a positive. The correlation between emotional intelligence and job performance has been explored in diverse organizational and work settings. Enhancing cognitive intelligence involves engaging in tasks like reading complex literature, solving intricate puzzles, acquiring new competencies, engaging in intellectual dialogues, and consistently broadening one's knowledge across multiple domains. Additionally, maintaining a healthy lifestyle through physical activity, sufficient rest, and proper nutrition can further bolster optimal cognitive function. Individuals with high intellectual intelligence are better able to analyze situations critically, identify problems, and find innovative solutions, which is invaluable in facing challenges and increasing productivity. They can absorb new information and understand complex concepts more easily, allowing them to adapt to changes and new trends in the work environment more efficiently. These individuals also analyze information more deeply, consider multiple perspectives, and make smarter decisions, which is crucial for making strategic decisions and solving problems effectively. Furthermore, they can express their ideas clearly and persuasively, facilitating collaboration with colleagues, presenting ideas, and influencing others. Their ability to think outside the box and see patterns and new ideas encourages innovation and creative problem-solving, which can increase organizational productivity and competitiveness.

The results of statistical analysis proving the fifth hypothesis state that Innovative behavior has a significant positive effect on supply chain performance. This result means that the higher the degree of employee innovative behavior can improve the performance of employees of water supply companies in Central Java. The results of this study are in accordance with research Li et al. (2020) which reveals that employee innovative behavior both directly improves and indirectly improves job performance by reducing the negative impact of hindrance pressure supply chain performance. Numerous strategies can be implemented to enhance innovative behavior and performance. Establishing a conducive work environment that fosters receptivity to novel ideas, promotes calculated risk-taking, and allows room for experimentation is crucial for encouraging creativity. Granting employees autonomy in their tasks and flexibility to seek innovative solutions enhances their propensity to innovate. Constructing interdisciplinary teams that amalgamate varied perspectives and specialized knowledge stimulates fresh concepts and problem-solving approaches. Offering mentorship and educational initiatives aimed at honing employees' problem-solving, critical thinking, and creativity capabilities fosters innovation. Additionally, creating a reward system and incentives that recognize innovative behavior motivates employees to explore new ideas. Providing insightful feedback regarding employees' innovation endeavors, encompassing both achievements and setbacks, is essential for learning and enhancing their innovative aptitude. Leaders showcasing innovative conduct in their decision-making and professional undertakings inspire and motivate employees to emulate their example.

## 6. Conclusions

Emotional Intelligence and Intellectual Intelligence have a significant positive influence on employee innovative behavior. Employee innovative behavior has a very strong positive influence on supply chain performance. Emotional intelligence and



intellectual intelligence also have an indirect influence on supply chain performance through innovative behavior as a mediator. The influence of innovative behavior on supply chain performance is greater than the direct influence of emotional intelligence and intellectual intelligence.

Based on the findings above, this research suggests that organizations consider Emotional Intelligence (EI) in their selection and training programs to encourage an innovative workforce. Organizations should develop training and development programs to increase employee EI and Intellectual Intelligence through training in emotional management, interpersonal communication, problem-solving, critical thinking, and creativity. Additionally, organizations must create a work environment that supports and encourages innovative employee behavior by providing greater autonomy, encouraging experimentation and cross-functional collaboration, and allowing space to fail safely. Developing reward and incentive systems that recognize and reward employees' innovative behavior will motivate them to continue innovating and contributing positively to supply chain performance. Organizational leaders must demonstrate exemplary innovative behavior and encourage employees to adopt the same mindset. Regular evaluations of the levels of emotional intelligence, intellectual intelligence, innovative behavior, and supply chain performance are necessary to identify areas needing improvement and to develop appropriate strategies. By implementing these recommendations, organizations can enhance employee innovative behavior, ultimately improving both employee and supply chain performance.

This research sample was only taken from 5 (five) water supply companies spread across five big cities in Central Java. In reality, there are around 42 (forty-two) water supply companies spread across various cities in Central Java. In this research the independent variables used are limited, where only two independent variables are used, namely Emotional Intelligence and Intellectual Intelligence. In reality, many other factors influence innovative behavior and performance of water supply companies in Central Java.

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