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Insights on the relationship between decision-making style and personality in software engineering

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Abstract

Context: Software development involves many activities, and decision making is an essential one. Various factors can impact a decision-making process, and by understanding such factors, one can improve the process. Since people are the ones making decisions, some human-related aspects are amongst those influencing factors. One such aspect is the decision maker's personality. Objective: This research investigates the relationship between decision-making style and personality within the context of software project development. Method: We conducted a survey in a population of Brazilian software engineers to gather data on their personality and decision-making style. Results: Data from 63 participants was gathered and resulted in the identification of seven statistically significant correlations between decision-making style and personality (personality factor and personality facets). Furthermore, we built a regression model in which decision-making style (DMS) was the response variable and personality factors the independent variables. The backward elimination procedure selected only agreeableness to explain 4.2% of DMS variation. The model accuracy was evaluated and deemed good enough. Regarding the moderation effect of demographic variables (age, educational level, experience, and role) on the relationship between DMS and Agreeableness, the analysis showed that only software engineers' role has such effect.

Conclusion: This paper contributes toward understanding the relationship between DMS and personality. Results show that the personality variable agreeableness can explain the variation in decision-making style. Furthermore, someone's role in a software development project can impact the strength of the relationship between DMS and agreeableness.

Keywords

Author Keywords: [Decision-making style](#); [Personality](#); [Software engineering](#)

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