UNCOVERING RISK PROFESSIONALS' INTENTION TO USE DIGITAL TECHNOLOGIES: EMPIRICAL EVIDENCE FROM THE ITALIAN SETTING

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AGENDA

1.BACKGROUND

- This paper is rooted in the increasing challenges that disruptive digital technologies have been posing over the last few years to practitioners, professionals and organizations, fostering full re-think of strategic, operational and behavioural models (Büyüközkan and Göçer, 2018).
- In line with a growing number of authors that discussed the potential of digital technologies for risk professionals (Hodge, 2020, Taarup-Esbensen, 2019, Deloitte, 2021; McKinsey, 2015), we argue that empirical research on the intentions and capacity of such actors to use ICTs is required to inform planning and practice at professional and institutional levels. Extant literature has addressed the technology acceptance domain (i.e. Lou and Li, 2017; Kim and Song, 2018; Arias-Oliva et al., 2019; Grover et al., 2019).
- In line with a growing number of authors that discussed the potential of digital technologies for risk professionals (Hodge, 2020, Taarup-Esbensen, 2019, Deloitte, 2021; McKinsey, 2015), we argue that empirical research on the intentions and capacity of such actors to use ICTs is required to inform planning and practice at professional and institutional levels.
- Extant literature has addressed the technology acceptance domain (i.e. Lou and Li, 2017; Kim and Song, 2018; Arias-Oliva et al., 2019; Grover et al., 2019).
- Consistently, our study provides insights on risk managers' intentions to use digital technologies based on empirical evidence from Italy.

2. LACK OF LITERATURE

- Notwithstanding the growing emphasis about this topic there are no published studies exploring risk managers' intention to use digital technologies in their activities.
- This is surprising considering, the magnitude of change that such technologies is expected to bring to professional practice, which will impact societal relevance and re-shape risk management professional and practice roles and responsibilities.
- The comprehension of these dynamics, and whether and how these impact on these technologies' acceptance and use, is of extreme relevance, from a managerial and policy-making perspective.

Therefore, this paper, ***aims to ascertain risk managers' intentions to use digital technologies in performing their tasks*** by tapping into the factors affecting their motivation.

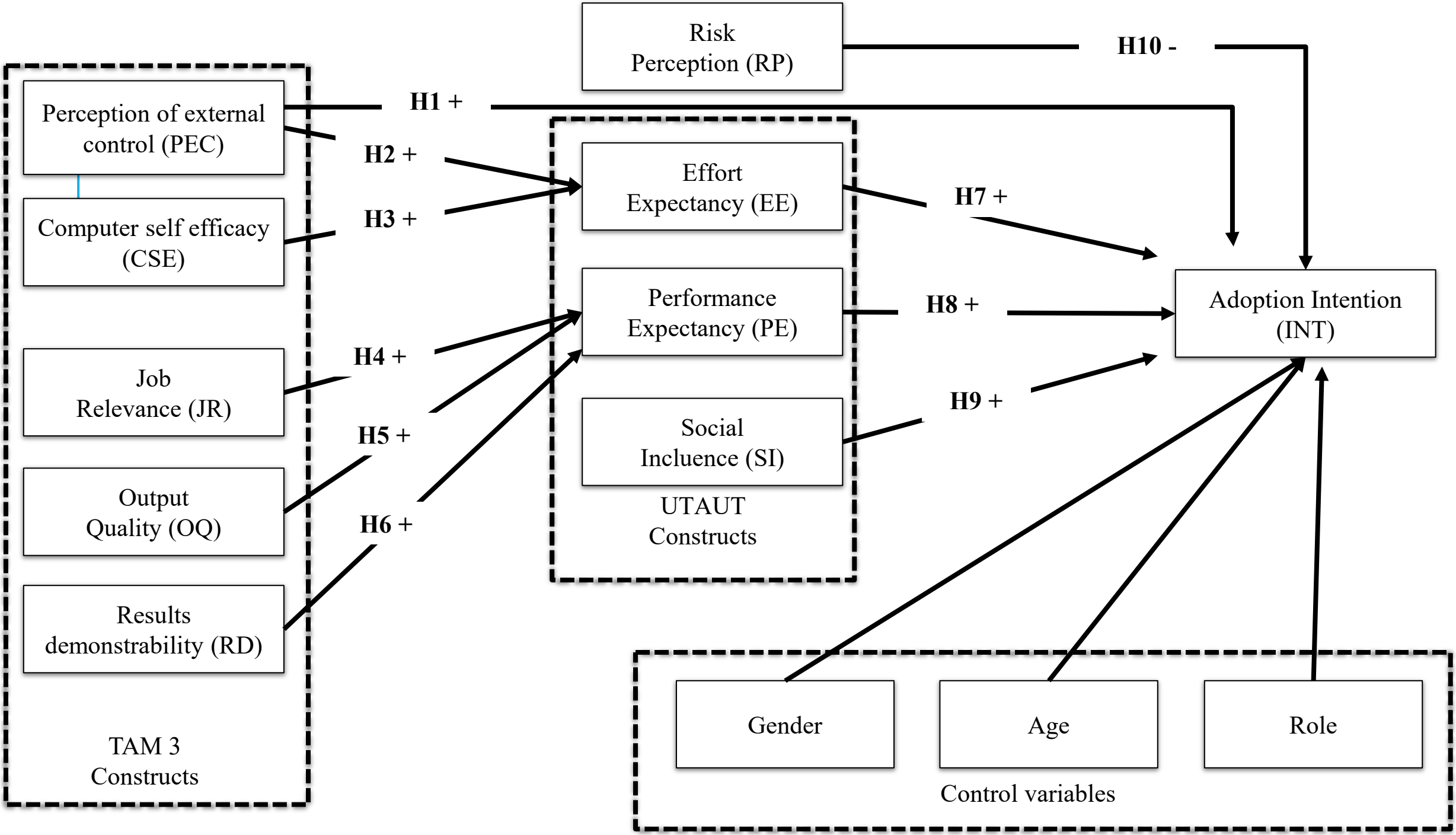
3. THEORETICAL FRAMEWORK AND HP. DEVELOPMENT

- Bearing in mind that the complexity of the technology and the professional category encompassed pose arduous challenges, and following Ferri et al. (2020a) we developed our research model by integrating two prominent theoretical frameworks, namely, and Technology Acceptance Model 3 – TAM3 – and Unified Theory of Acceptance and Use of Technologies – UTAUT.

- Both models explore how users decide to implement and/or adopt a technology posing from the idea that intention to use has two main determinants: perceived usefulness and perceived ease of use. TAM and its evolutions (TAM2, TAM3) are the models more used in information systems and information technology literature to explain people's intention to use a technology.

- This predictive model has proved its relevance in a number of contexts and is crucial in this paper to understand the main actors' motivations for blockchain adoption.

- Because both models do not employ risk as key variable for human decision and in order to improve the predictive power of our results, in line with previous literature, **we developed a mixed model.** Our model employ both TAM 3 and UTAUT Variables integrated with risks perception.


Risk Perception (RP)
H10 -
Perception of external control (PEC)
H1 +
H2 +
Computer self efficacy (CSE)
H3 +
Effort Expectancy (EE)
H7 +
Performance Expectancy (PE)
H8 +
Adoption Intention (INT)
Job Relevance (JR)
H4 +
H9 +
Social Incluence (SI)
H5 +
Output Quality (OQ)
H6 +
UTAUT Constructs
Results demonstrability (RD)
TAM 3 Constructs
Gender
Age
Role
Control variables

4.RESEARCH DESIGN

- In order to test our hypotheses, a Likert-based questionnaire was developed.

- The questionnaire consisted of 4 section and 41 questions. The first section was aimed at collecting respondents' personal information while others were aimed to the theoretical construct. In line with previous authors, all the questions were taken from previous studies and modified according to the digital technologies usage and the research context (i.e. Ferri et al., 2020a; Gangwar et al., 2015). Also, in order to avoid the risk of "central bias", we employed an even-numbered Likert scale for all the questions, ranging from 1 (minimum) to 6 (maximum).

- To ensure the reliability of the questionnaire, a pilot test using volunteers between PhD students, researchers and management students was carried out. The test was useful to find wording biases like ambiguous, complex and/or vague questions and other minor problems that were fixed.

- The questionnaire was disseminated in January and February 2021 among risk professionals. Following the approach of previous authors (i.e. Ferri et al., 2020a), questionnaire was disseminated online, using Linked-in and other social networks, among people working as risk managers/staff in Italy. An invitation letter was sent to each potential participant. We reach 782 risk professionals while just 208 of them provide full responses, reaching a response rate of 26,59%.

4.RESEARCH DESIGN

- To assess the questionnaire reliability different tests were performed.
- Following the approach of previous authors (Gangwar et al., 2015; Ferri et al., 2020a), we performed Barlett's test of sphericity and Kaiser-Meyer-Olkin measure of sampling adequacy (KMO). Both test provided significative results (respectively 0.000 and 0.812).
- Also, a principal component analysis (PCA) and a Varimax rotation with Kaiser normalization were carried out. Variables were grouped in 13 factors explaining 73.56% of the total variance. No items were dropped after our tests.
- Finally, we checked for the survey reliability by using Cronbach's Alpha. Results are statistically reliable because Crombach's value range between 0.788 and 0.966.

5.RESEARCH RESULTS AND MODEL FIT

- We perform further tests in order to assess the model goodness-of-fit.
- A first measure of the overall goodness of fit was carried out using the chi-square test. Our test shows an overall chi-square divided for degree of freedom of 0.730 (with $p < 0.001$).
- Because chi-square is particularly sensitive to sample size, we carried out different fit indexes.

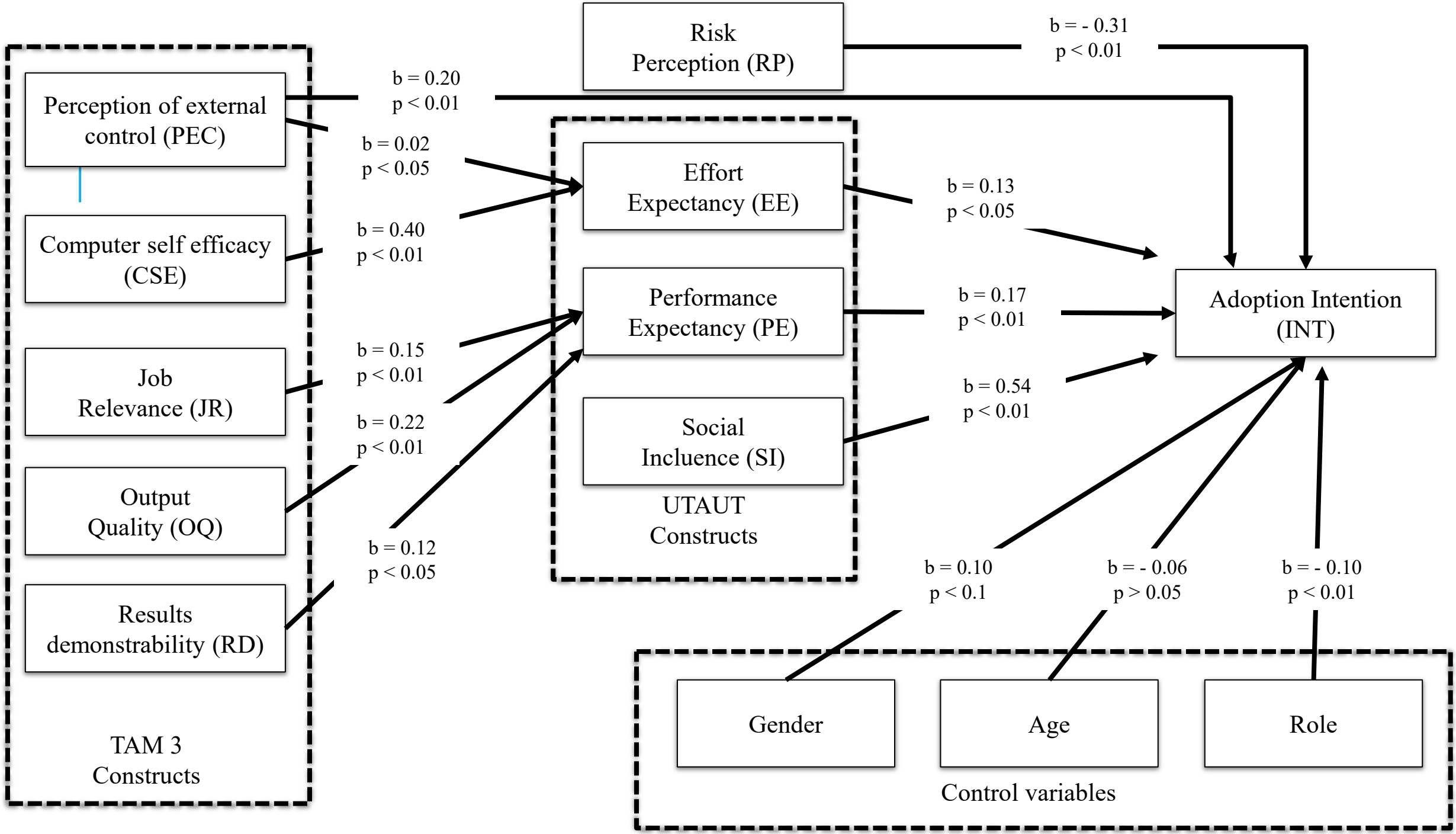
Fit index	Reference value	Results
Comparative Fit Index (CFI)	> 0.95	0.966
Normed fit index (NFI)	> 0.95	0.948
Relative fit index (RFI)	> 0.95	0.951
Incremental Fit Index (IFI)	> 0.95	0.971
Root mean square (RMSEA)	< 0.08	0.030
Average Block VIF (AVIF)	Acceptable <= 5 Ideally <= 3.3	1.493

6.RESEARCH RESULTS

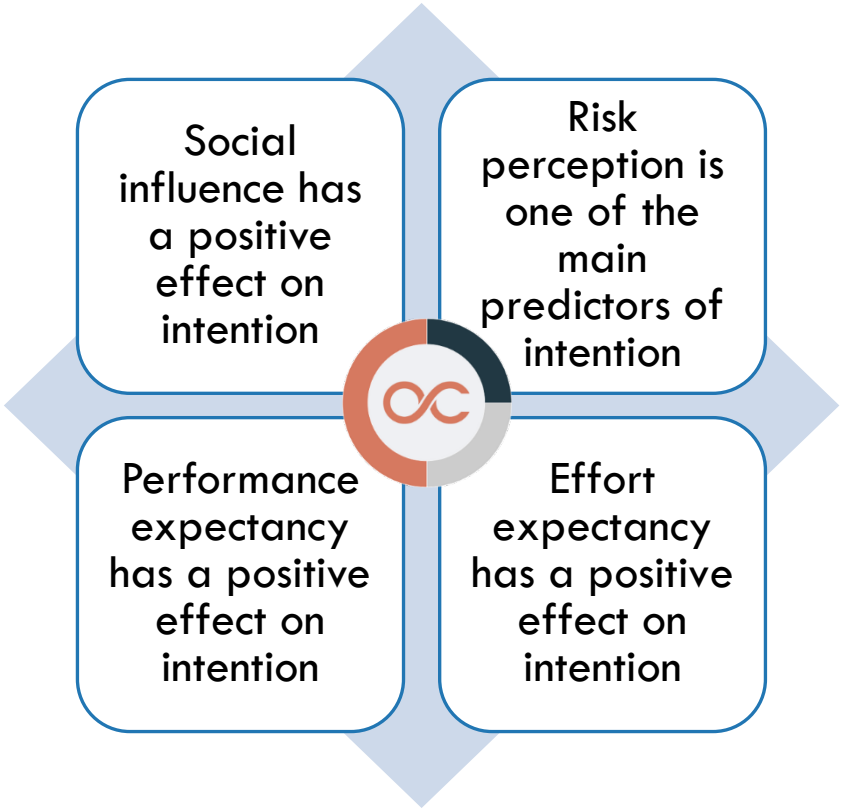
- After the measurement of model's goodness-of-fit, we carried out structural equation modeling with confirmatory factor analysis approach to understand the effect of each latent variable on the risk professionals' intention to use digital technologies.

- All our hypotheses were confirmed.

- Accorded to our results risk professionals' intention to use digital technologies is strongly affected by SI, PEC and RP, while EE and PE are the theoretical construct with a lower effect. The overall model explains 60% of the sample's total variance (R-square = 0.60).


Risk Perception (RP)
b = - 0.31
p < 0.01
Perception of external control (PEC)
b = 0.20
p < 0.01
Computer self efficacy (CSE)
Job Relevance (JR)
Output Quality (OQ)
Results demonstrability (RD)
TAM 3 Constructs
b = 0.02
p < 0.05
b = 0.40
p < 0.01
b = 0.15
p < 0.01
b = 0.22
p < 0.01
b = 0.12
p < 0.05
Effort Expectancy (EE)
Performance Expectancy (PE)
Social Incluence (SI)
UTAUT Constructs
b = 0.13
p < 0.05
b = 0.17
p < 0.01
b = 0.54
p < 0.01
Adoption Intention (INT)
b = 0.10
p < 0.1
b = - 0.06
p > 0.05
b = - 0.10
p < 0.01
Gender
Age
Role
Control variables

7.CONCLUSIONS



Overall, our results show that SI and RP are the main predictors of risk professionals' intention to use digital technologies in their tasks.

These findings are in line with those of previous authors that investigated professionals intention to use new technologies (Hodge, 2020; Taarup-Esbensen, 2019) and with literature about technology usage and risk perception (Pavlou, 2003; Caldarelli et al., 2017; Ferri et al., 2020b).

The strong effect of SI on risk professionals' INT to use new technologies confirms the findings of other authors in other field (Bierstaker et al., 2013, Ferri et al., 2020a and 2020b) showing that the social pressure in new technologies usage has a stronger effect than effort expectancy and performance expectancy.

By adding RP as predictor of INT, we show the negative effect of risk perception on people intention to use new technologies in theirs working routine despite the positive effect of EE and PE. This may happen because risk professionals' feel more risky switch to new technologies than continue working with older one despite the expected advantage in terms of JR, OQ and PE.

8. LIMITATIONS AND FUTURE RESEARCH

- The paper's limitations can also be seen as starting points for the emergence of further research.
- First, our model examines the intention to use DT at an early stage of technology adoption, while the intention to use a technology may vary over time, as a result of several experience from different people. Therefore, future studies could broaden our findings using a longitudinal approach measuring employees' perceptions before and after DT introduction in their risk activities.
- Second, our sample is limited to people working as risk managers/staff in Italy. However, differences in perceptions may arise between risk professional working in different countries, who are likely to have different motivation to use (or avoid) DT. Thus, future studies could investigate the existence of differences in technology acceptance within different countries. From this perspective, there is also need to highlight that IT usage acceptance research generally examines the intentional usage context. Further research could investigate whether significant differences exist between voluntary and mandatory settings.

THANK YOU FOR YOUR ATTENTION

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