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Deux-Ex Machina

1. Background and aim

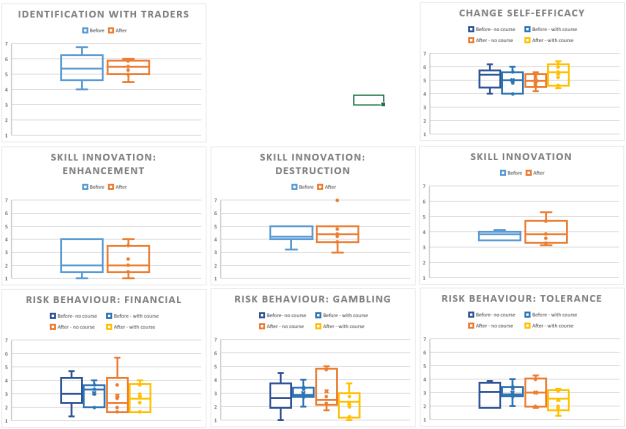
One unforeseen outcome of the pandemic is the boost of online learning and the effects on students as 'real-life' practitioners in capital markets and economics. Deux-Ex Machina investigates students' performative behaviours before and after being exposed to unrestricted access to 24/7 Professional Trading platforms (Bloomberg/Refinitiv). The combination of humans and machines is associated with human burnout and unexpected consequences; the purpose of this case study is to explore student's performative behaviour as practitioners and the unintended consequences on their identity, clarity of actions towards a professional future, risk tolerance and innovation. This study contributes to analysing the students' experiences under changing circumstances and parallels the literature on computer-driven trading.

2. Instruments of performativity and key literature

Performativity is measured by the collective identification of a professional group of users of Refinitiv that experience competence acquisition/build-up/obsolescence through a process characterised by learning under risk-taking and competence uncertainty towards a new type of training.

- **Collective identification within workgroups** (Zheng et al. 2014). The extent to which trading software on a Trading Room close the gap between students and professional referents, i.e. how far students' identity towards the professional group improves.
- **Competence innovation** (Gatignon et al. 2002). Innovation locus is characterised as students' competence acquisition and competence enhancement vs. destruction
- **Risk Behaviour** (Weber et al. 2002)**.** Measurement of risk-taking in the domain of financial decisions (investing vs gambling)
- **Change self-efficacy** (Holt et al. 2007). On the questionnaire change in confidence, it refers to the extent to which students feel that they have or do not have the skills, or are not able to execute the tasks and activities associated with the implementation of learning in a Trading software.

3. Preliminary results of the survey



- There is a high **Collective Identification with Traders;** the software contributes to consolidating all students into a high identification**.**
- The change in confidence or **Change in Self-Efficacy** increases by 9.7% when using the software; in contrast, the control group decreases by 4.65%.
- The **Skill Innovation Through Enhancement** is very high (reversed scale) and improves by 10.81% after learning the software. In contrast, **Skill Innovation via Obsolescence** is virtually neutral before the course and increases by 8% after the teaching delivery.
- After exposition to trading software, students exhibit a decrease in **taking a financial risk** by 10%, 24% to **gambling**, and overall **risk tolerance** decreases by 18%.
- In contrast, students who did not undertake the software instruction increase their **gambling risk** by 13% and their overall **risk tolerance** by 4%.

3. Preliminary regression and model equation

This preliminary results indicate **Collective identification** increases by 0.38% when **innovation skills via enhancement** increases by 1%, or increases by 0.52% if **Change confidence (change self-efficacy)** increase by 1%**.** The insignificant dummy variable indicates insignificant relationship with the dummy for before and after the instructional material.

In other words, students increase their identification to professionals in trading when confidence increase as a result of skill set development and when the new skill set is developed through enhancement rather than rendering previous software experience obsolete.

Another interesting finding is the lack of relationship between Collective identification and Risk Behaviour.

As expected, Risk Tolerance to Financial investments and gambling appears to decrease as enhancement of skills increase.

OLS regression

Regression Statistics	
Multiple R	0.779556481
R Square	0.607708307
Adjusted R Squ	0.47694441

Model equation

IT = ISE + CS + dummy + int

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Int	3.82	1.14	3.36	0.01
ISE	-0.38	0.15	-2.60	0.03
CS	0.52	0.21	2.52	0.03
dummy	-0.25	0.33	-0.76	0.47

IT: Identification with traders
ISE : Innovation skillset through enhancement
CS : Change self efficacy / change confidence
dummy: before and after the course
int: intercept

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