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Research fellowship AI-aided creation of hybrid business models: balancing revenues and impact via digital tools- Università Ca' Foscari Venezia (Italian law 30 December 2010, n.240, art. 22).

The present document in English is to be considered as a mere summary of the main provisions of the notice of competition which is available in Italian at the following ([link](#)) The text in Italian is the official text of the notice of competition for all legal intents and purposes and, in the event of non-conformity with the present document, it shall prevail.

Description

The Department of Management at Università Ca' Foscari Venezia invites applications for two-year fellowship in: **AI-aided creation of hybrid business models: balancing revenues and impact via digital tools**, under the supervision of prof. Francesco Rullani - SECS-P/08 (Management). The research is a joint initiative of BLISS Digital Impact Lab at the Department of Management and Business School, City University of London (team: Charles Baden-Fuller, Alessandro Giudici, Stefan Haefliger, Neil Maiden)

Abstract

This project investigates human-machine relations to unfold their potential in generating novel business models. It stands at the crossroad between 1) the study of digitally-enhanced creativity, 2) business model innovation, 3) the literature on hybrid organizations. In particular, the project aims at developing an AI-tool to support entrepreneurs who seek to innovate their business models. The tool will be applied in the empirical setting of social enterprises, i.e., hybrid organizations whose dual goal (producing both revenues and impact) imply the adoption of complex business models. The field work will consist in 1) a *qualitative* assessment of the AI-enhanced creative process, aimed at highlighting the characteristics of human-machine joint creative work, and 2) a series of *randomized field experiments* to evaluate the viability and performance of AI-tools in business model innovation, producing also novel practical knowledge for social enterprises to solve societal issues.

State of the Art and Research Gap

Many digital creativity support tools -i.e., tools able to augment people's creative capabilities- have been implemented for professionals in creative industries such as the performing arts, music, and film and television (e.g. Bartindale et al., 2013).

These tools are far less diffused outside of the creative industries, even if the first implementations proved to have significant impact on product innovation and manufacturing (e.g., Maiden et al., 2020). These experiments showed that such technologies may 'act' on their own agency within innovation processes (Zafari and Koeszegi, 2018) becoming a 'partner' to the innovator.

However, adoption of these tools seems nonexistent when dealing with innovation at the organizational level, such as business model innovation. Business models span the mechanisms -i.e., the elements, their causal relations, and their architecture- organizations use to create and capture value (Baden-Fuller and Haefliger, 2013). The possibility to generate relevant competitive advantage by changing these elements or their architecture, and the difficulty in creating novel nontrivial solutions (Foss and Saebi, 2018) greatly increase the potential of digital creativity support tools in this field.

Such potential -still underresearched- may find a perfect testbed in organizations whose business models are particularly challenging. Social enterprises, i.e., organizations seeking at the same time economic sustainability and social and environmental impact (Mongelli et al., 2018), are perfect for the purpose, as their dual or 'hybrid' nature brings a new layer of complexity in business model innovation that stimulates entrepreneurial creativity (Giudici et al., 2020).

In sum, applying digital creativity support tools -and in particular AI- to business model design for hybrid organizations such as social enterprises represents the frontier of research object of this project.

Contribution

The project ties three streams of literature, contributing to each of them as follows:

1) **AI as a tool to aid creativity.** The present project will be one of the first attempts to apply AI-based creativity support tools to business model innovation. Through these tools, entrepreneurs 'share' their experiences with the AI, and the AI converts them into suggestions that support human intuition regarding organizational problems. The project will thus offer new insight on how new ideas can be generated through humans-machine collaboration beyond classic creative outputs (such as art), and on how technology and human agencies interact more in general.

2) **Business model innovation.** As business models are complex systems, entrepreneurs willing to innovate them need to apply their creativity to a complex solution space. Digital technologies such as the AI-tool developed within this project can offer a new perspective on such solution space, that then interacts with the human perspective. The research will thus contribute by revealing what type of changes introducing a new "actor" (the AI) will imply for business model innovation processes and outcomes.

3) **Hybrid organizations.** In hybrid organizations such as social enterprises, the presence of multiple aims creates tensions. Social entrepreneurs engage in creative business models design to prevent contradictions to manifest in the first place. Such design can reach high level of complexity: tradeoffs at the business model level (see point 2 above) interact here with tradeoffs between the economic and socio-environmental sides of the organization. AI-enhanced creativity may see socio-environmental problems from a different perspective, revealing new ways of thinking about hybridity. Studying the underlying innovation process can thus reveal the "blind spots" of current research on business models for social enterprises, and open ways for new conceptualization of hybrid organizations.

Method

The AI-based creativity support tool will be developed in collaboration with the *National Centre for Creativity enabled by Artificial Intelligence* (CebAI), while business model will be captured relying on the *Business Model Zoo* framework (<http://www.businessmodelzoo.com/>). Both resources are accessible thanks to the collaboration with City's Business School of the City University of London, to which they belong.

Activities:

- 1) literature review: digital creativity support tools, business model innovation, hybrid organizations
- 2) study of the BM Zoo framework and of the CebAI tools, and preparation of their interface
- 3) desk research and interviews to generate BM-Zoo-based description of 100+ business models of existing social enterprises in the format required by the CebAI tool.
- 4) integration of the material into the CebAI tool.
- 5) field research by employing the AI tool to help social entrepreneurs innovate their business models. The research will unfold how human-AI interaction occurs and measure its output.
- 6) the methodology for this phase will be twofold:
 - a. *qualitative*: singling out (via pattern detection, protocols, interviews ...) the creative mechanisms spurring from the machine-man interaction
 - b. *randomized field experiments*: comparison of processes and outcomes of AI-treated group vis-à-vis control group. This phase will benefit from links with the *Center for Experimental Research in Management and Economics* (CERME) within Ca' Foscari.

Deliverables

- a) Submission of the first paper to an international journal (at least 4 ABS)
- b) Publication in Department Working Paper Series of the second paper (at least one month before the end of the contract)
- c) Presentation at Department seminar of one of the two papers (at least one month before the end of the contract)
- d) Submission of at least one paper to key conference in the field, e.g., Academy of Management Meeting.
- e) Document describing the AI-tool specificities

- f) Dataset of hybrid Business Models (schemas, interviews, and summary excel files)
- g) Layout of 2 projects based on the gathered data detailed in the following sections: Purpose, Overview of the Literature, Activities, Contribution, Gantt Chart, Possible Funding, Possible Further Empirical Analysis, Target Journals.

References

- Baden-Fuller C. & Haefliger S. (2013) Business Models and Technological Innovation. *Long Range Planning* 46:419–426
- Bartindale T. et al. (2013). Facilitating TV Production Using StoryCrate. In *Proceedings of the ACM Conference on Creativity and Cognition*, 193-202.
- Foss N.J. & Saebi T. (2018) Business models and business model innovation: Between wicked and paradigmatic problems. *Long Range Planning* 51 (2018) 9-21
- Giudici A. et al.. (2020). Successful Scaling in Social Franchising: The Case of Impact Hub. *Entrepreneurship Theory and Practice*, 44(2), 288–314
- Maiden M. et al. (2020) Evaluating an Information System to provide Creative Guidance about Health-and-Safety in Manufacturing, *Behaviour & Information Technology*, forthcoming.
- Mongelli L., Versari P., Rullani F., Vaccaro A. (2018) Made in Carcere: Integral Human Development in extreme conditions, *Journal of Business Ethics*, 152, 977–995
- Zafari S. & Koeszegi S.T. (2018). Machine agency in socio-technical systems: A typology of autonomous artificial agents. In *IEEE Workshop on Advanced Robotics and its Social Impacts*.

Who can apply

Prospective candidates are expected to hold a doctoral degree and scientific-professional curriculum suitable to the development of research activities related to the fellowship.

Ca' Foscari encourages applications from researchers with positive evaluation in all the criteria in individual proposals such as Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar.

Researchers having successfully completed Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar funded projects are warmly encouraged to apply.

Duration of contract: 24 months (starting: **February 28th 2021**).

Gross salary: the research fellowship amounts to 24.300,00 Euros per year, including taxes depending on applicant's filing status (cost to Ca' Foscari: € 29.850,00)

Deadline for submission of applications: **January 18th 2021, 12:00 noon (Italian time)**.

How to apply:

Candidates should submit:

1. The application form;
2. A motivation letter (max 1 page) along with their CV in European format, duly dated and signed, both to be enclosed as a one single.pdf file. ([link](#)). The "Publications" section in the CV must report the candidate's publications, indicating, where applicable, the relative ABS-DMAN category as defined at:
https://www.unive.it/pag/fileadmin/user_upload/dipartimenti/management/documenti/ASSICURAZI ONE_Qualita/Piano_Triennale/2018-2021-DMAN-ABS-Guide_aggiornata_al_13.03.pdf
3. A copy of a valid identity document (either Identity Card or Passport);
4. (If available) Evaluation Summary Reports of Marie Skłodowska Curie Actions - Individual Fellowships/ ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) individual proposals having passed all the evaluation thresholds;
5. (If available) Details of Marie Skłodowska Curie Actions - Individual Fellowships, ERC Starting Grants,

FIRB (Italian Fund for basic research investments)/ SIR Scientific Young Independence Research funded projects;

6. Declaration on availability to held the interview in remote ([link](#)) to be send via email at the following address: segreteria.management@unive.it
7. All documents, qualifications and publications relevant for the selection procedure (please, see the notice ([link](#)))
8. Optional: reference letter(s)

All the schemes of the quoted documentation are available on the website ([link](#)).

How to submit your application

Applications should be submitted by the online procedure, available on the notice webpage ([link](#))

Or submitted here: <https://apps.unive.it/domandeconcorso-en/accesso/dma-eccellenza-rullani>

The candidate, after the uploading, will receive a submission number and an e-mail acknowledging receipt of his/her application.

The candidate if necessary could access the procedures for updating any data and materials by the link provided by the e-mail, in any case any updates must be made no later than the deadline **January 18th 2021, 12 noon (Italian time)**.

Please note that the University can be contacted for any support needs by the candidate until **January 14th, 2021 included (Italian time)**.

Please, notice that the University will be closed on the following days: December 24th 2020 - January 06th 2021.

Please note that in case of a high number of applications and/or weight of the materials loaded by the candidates the system might become slower. Therefore it is suggested not to start the process close to the deadline.

NB: the University does not take on responsibility for wrong or late communication of addresses, nor for any communication problem not depending on the University.

Criteria

The evaluation takes into account the criteria and thresholds described in the table below.	
Evaluation criteria	Scores
Qualification, including education, publications, work experience, awards, etc., and tests (if any)	Maximum 60 points; Minimum admission score: 42/60
Interview and other tests (if any)	Maximum 40 points Minimum admission score: 28/40
TOTAL AVAILABLE SCORE	100/100
Threshold for inclusion in the final ranking	70/100

Selection procedure

The interview will be on February 2nd 2021, 10:00 AM (Italian time). The interview will be held in remote only. Further details on how to connect online will be published alongside the convocation notice.

The short-list of the candidates admitted to the interview, or any postponement, will be published on the University's webpage on January 27th 2021 ([link](#)).

Information and contacts

Candidates may find further details about the application process and the research project in the official call published on the following ([link](#))

Preliminary inquiries about the research program should be addressed to Francesco Rullani <francesco.rullani@unive.it>

Additional information about the application procedure may be obtained from Elisabetta Cagnin <lisa@unive.it>