

# Research finds AI algorithms can help 'mumpreneurs'

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New research, led by academics from Royal Holloway, University of London found AI algorithms generated significant economic and non-economic value for "mumpreneurs."

The research, [published](#) in the *Information Systems Journal*, was led by Dr. Nisreen Ameen and Dr. Vera Hoelscher from the School of Business and Management at Royal Holloway.

With many mothers starting their own businesses and with the U.K. currently ranked third highest in the world for average childcare costs, Royal Holloway researchers set out to explore the experiences of women running businesses while raising children. They particularly focused on those who run businesses through Instagram (which is highly influenced by AI algorithms) and create a [brand identity](#) as both "mums" and "entrepreneurs," or "mumpreneurs."

While researching 26 mumpreneurs running their own businesses on Instagram, researchers found that Instagram's AI algorithms, while sometimes perceived negatively, created four key types of value for these [women entrepreneurs](#): engagement, cognitive, economic, and self-preservation value.

The researchers identified two main mechanisms through which AI algorithms create this value for mumpreneurs: recommended connectivity and adaptability. The study highlighted that mumpreneurs experienced different types of value at different stages of their entrepreneurial journey on Instagram.

Engagement and cognitive value became apparent early in the process,

while economic and self-preservation value came later. Self-preservation value was assessed by asking the mothers whether they felt their role as a mumpreneur had helped them to reclaim their pre-motherhood identity.

A Google X-Ray search—a method which finds precise results from websites by combining keywords and hashtags—was used to identify participants by finding intersecting hashtags for mumpreneurs and specific geographic locations such as #London or #Birmingham. The team found 26 mumpreneurs running their own businesses on Instagram, with children aged 11 years-old and younger—which the researchers believed to require greater caring responsibilities.

The mechanics of the AI algorithms means certain content inherently performs better. They analyze vast amounts of user data to personalize content, suggest relevant accounts, and optimize post visibility based on factors such as user preferences, engagement patterns, and content quality.

The platform's algorithms drive meaningful connections by suggesting relevant content and accounts based on user behavior and preferences, while mumpreneurs continuously adapt their online activities to maximize visibility and engagement in response to algorithmic changes.

The team also found that several of the women interviewed spoke about the importance of engaging with the wider community of mumpreneurs. These women found they were able to develop relationships with other like-minded mumpreneurs on Instagram, encouraging one another and helping to boost the engagement of each other's content on the platform.

However, while the research suggests that the role of mumpreneur allows mothers to reclaim their pre-motherhood identity, or to discover themselves as independent women after pregnancy, some expressed concerns over their interactions with Instagram as a platform.

Some participants used phrases like "playing the game" and "staying on top of the game" when describing how they would follow [current trends](#) to navigate Instagram's algorithm and keep their business relevant across the [digital platform](#).

Dr. Nisreen Ameen from the School of Business and Management at Royal Holloway said, "As the digital landscape continues to evolve, it is crucial to understand how AI algorithms shape user experiences and value creation, particularly for vulnerable groups like mumpreneurs.

"By shedding light on these dynamics, we hope to empower women entrepreneurs and inform the development of more inclusive and supportive AI-driven digital platforms."

Dr. Vera Hoelscher from the School of Business and Management added, "Our research shows that while Instagram as a platform gives women the opportunity to become entrepreneurs, this is set within a context of hyper-unaffordable childcare and ever-changing algorithms.

"Nonetheless, women benefitted from the economic and non-economic values the platform afforded them and often enjoyed carving out successful entrepreneurial identities for themselves."

Professor Christos Tsinopoulos, executive dean of the School of Business and Management added, "The power and influence of AI in driving entrepreneurship is becoming increasingly evident. This is an excellent example of how our researchers investigate the benefits but also the ethical challenges that AI and social media can bring.

"Such work informs our teaching and contributes towards the development of a more inclusive entrepreneurial ecosystem. Congratulations to Dr. Ameen and Dr. Hoelscher for this outstanding work."

**More information:** Nisreen Ameen et al, Exploring how mumpreneurs use digital platforms' algorithms and mechanisms to generate different types of value, *Information Systems Journal* (2024). [DOI: 10.1111/isj.12518](https://doi.org/10.1111/isj.12518)

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