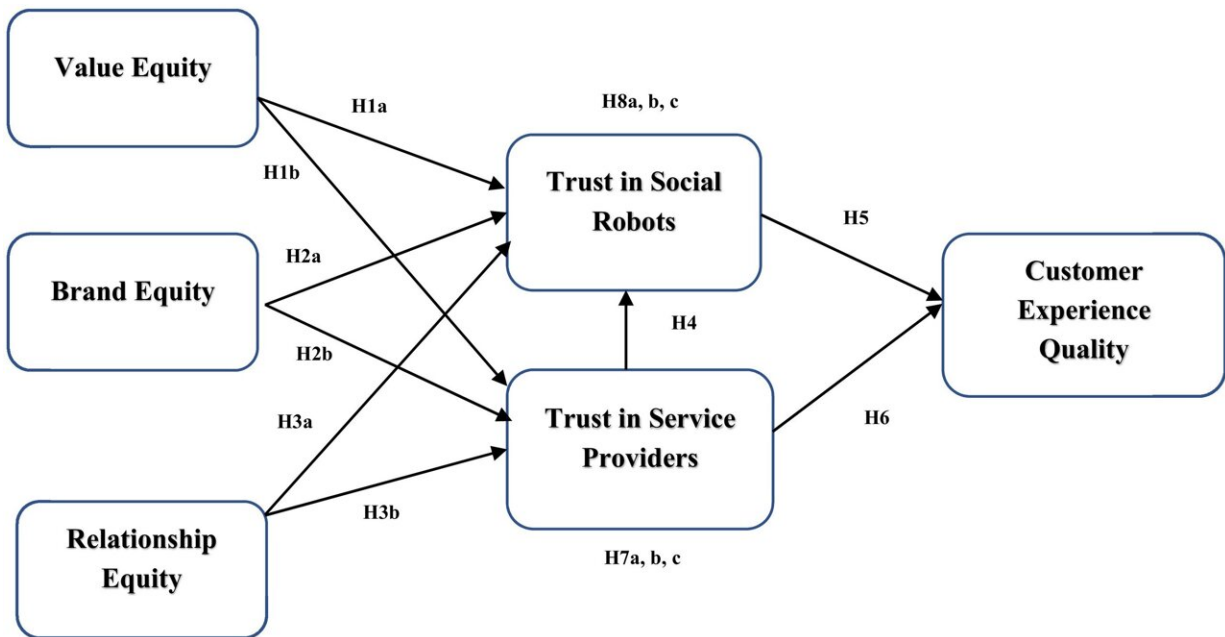


Businesses can benefit from social robots if trust is established, finds study

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Research model. Credit: *Technological Forecasting and Social Change* (2023). DOI: 10.1016/j.techfore.2023.123032

While the rise of artificial intelligence is proving to be a contentious issue, new research from Edith Cowan University (ECU) has found that the use of social robots in a commercial setting would likely be met with less resistance.

The study, by ECU's Marketing and Service Science Professor Sanjit

Roy, investigated the relationships among customer [equity](#) drivers such as value equity, brand equity, and relationship equity, [trust](#) in [social robots](#), and trust in service providers. The research is [published](#) in the journal *Technological Forecasting and Social Change*.

Professor Roy noted that the increasing prevalence of social robots in retail is consistent with Industry 5.0 tenets, which advocate for "humans and machines acting synergistically."

"The basic idea here is simple: Technology should augment, not substitute, those working in the services industry with flow-on benefits for customers. Indeed, social robots have been shown to act as entertainers, social enablers, friends, and mentors to customers, which suggests that robots can be perceived as supportive, emotional, and hence social actors," explained Roy.

Roy pointed out that social robots could perform many functions and roles with transformative potential when orchestrating customer experiences.

"For example, social robots have proven effective in handling repetitive tasks, like transporting objects and the execution of monotonous assembly jobs. More recently, they have shown that they can perform complex physical and cognitive assignments, such as identifying signs of worsening dementia in patients.

"Additionally, social robots are finding increasingly advanced applications in professional domains such as assisting in financial auditing and even aiding in surgical procedures through voice-activated robotic arms. These advancements enable service providers to scale their offerings, enhance their productivity, reduce operational expenses, and automate service processes, among other benefits," added Roy.

The research has shown that businesses could also benefit from the use of social robots, with effective and efficient customer service creating value equity for a company.

"The presence of social robots for service delivery results in greater perceptions of service quality in terms of efficiency and effectiveness, thereby increasing customers' perceived value equity," Roy said. "The value provided by social robots invokes trust between customers and social robots. Therefore, investing in value equity generates more trust, which can change customers' dispositions towards and interaction with service providers.

"In human-robot interactions, a successful interaction acts as the foundation of a (long-term) relationship, with every subsequent successful interaction generating greater trust between the parties. A series of flawless transactions ultimately leads to a situation or a state of inertia where customers look forward to interacting with the social robots. This implies that investing in relationship equity can generate more trust in social robots. Thus, it is anticipated that relationship equity will influence trust in service providers and trust in social robots."

However, Roy noted that replacing people with social robots could potentially reduce relational benefits, as robots may lack the authenticity and friendliness of a human employee. However, this negative aspect may not necessarily be detrimental to the [service provider](#) or customer if social robots can perform the required tasks with greater efficiency, meeting customers' need for convenience instead.

"We suspect that whether customers seek more utilitarian or social benefits from interactions with service providers depends on [boundary conditions](#), including industry and type of service provided. For example, in the context of retail banking, utilitarian aspects like the successful completion of a transaction often matter more than having a

friendly chat," Roy said.

The research found that trust in service providers was crucial in shaping trust towards social robots.

Customers without prior interaction with technology, including social robots, could not develop trust based on direct experience. In such instances, customers rely on other information about the service provider to form assumptions about how much they can trust social robots.

"Thus, initial trust is established through other cues, which implies that even in the absence of social robots, customers can still place varying levels of trust in them, depending on their experiences with and opinions about the service provider," he said.

"The study offers valuable insights for service providers adopting social robots in their operations. To optimize customer experiences with social robots, businesses should focus on enhancing relationship equity and brand equity, implying that for service providers, emphasizing brand and relationship equity is vital, as these factors directly impact customers' trust in the provider. When trust in service providers is present, customers' trust in social robots will be easier to obtain.

"Building a strong brand identity and nurturing long-term customer relationships can lead to greater trust, positively influencing customers' perceptions of social robots. Thus, retailers should prioritize trust-building initiatives as trust in service providers significantly mediates the [relationship](#) between customer equity drivers and customer experience quality. Transparent and reliable services, consistent communication, and delivering on promises can reinforce trust and positively impact [customer](#) experiences with social robots," said Professor Roy.

More information: Sanjit K. Roy et al, Customer experience quality

with social robots: Does trust matter?, *Technological Forecasting and Social Change* (2023). [DOI: 10.1016/j.techfore.2023.123032](https://doi.org/10.1016/j.techfore.2023.123032)

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