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GENERATIVE AI IN MARKETING: PRODUCTIVITY GAINS AND WORK AUTOMATION

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Extended abstract

The rapid development of Generative AI tools have raised concerns about potential misuse in marketing campaigns that create highly convincing, large-scale disinformation campaigns. Typical examples that stoke these anxieties include YouTube hosting political ads with AI-generated deepfake content, AI-generated images used in misinformation about the Israeli–Palestinian conflict, Russian disinformation campaigns using deepfakes about the Ukrainian president (Bontcheva et al. 2024), and more recently the deceptive Facebook ads campaign featuring deepfake videos of pro-Kremlin talking points about a local election in Moldova (Gilbert, 2024). These concerns are compounded by reports that found ChatGPT to be effective at creating disinformation campaigns at scale, but of limited use for fact-checking due to the intrinsic bias of prompt engineering and broader issues with hallucination and misalignment (Jacob et al., 2025; Węcel et al., 2023).

There are also concerns about work automation leading to job losses in the sector, with several lawsuits currently mounted against OpenAI for copyright infringement (Alter and Harris, 2023). These concerns intersect with the growing apprehension about AI's potential to cause widespread job displacement and disrupt the media sector. The Author's Guild has advocated clear AI usage guidelines to prevent the replacement of human writers by AI systems, citing the potential threat to employment within the industry, and the European Writers Council (2023) called for legal measures to prohibit AI from extracting and reproducing sentences from copyrighted texts without permission (Milliot, 2023). More broadly, the OECD estimates that 27% of jobs worldwide are at risk of rationalization through emerging AI technologies (OECD, 2023), a significant uptake from reports issued by the organization before the widespread use of Generative AI that estimated the risk of job losses due to automation at around 9% (Arntz, M. et al., 2016).

On the other hand, there is evidence that AI tools can improve productivity leading to the touted ‘productivity gain’ hypothesis. While studies are largely performed in controlled lab conditions, there is empirical evidence to this effect. Noy and Zhang (2023) ran randomized controlled trials with 444 college-educated professionals in human relations and marketing who performed 20-30 minutes tasks like writing news releases and brief reports. Participants using ChatGPT completed the tasks 37% faster than those who did not have access to the tool, the reported productivity effect, which also boosted job satisfaction by 20%. Similarly, Peng et al. (2023) ran a controlled experiment with software developers and found that those using GitHub Copilot performed entry-level tasks 55% faster than those who had no access to the tool. In other quarters, Bossen and Pine (2023) reported that clinical documentation integrity specialists (CDIS) used AI to process medical information in real-time and found that AI streamlined medical information processing of patients.

It is against this backdrop that we explored the use of ChatGPT for social media marketing strategies and its potential impact on employment. We take stock of the literature on productivity gain and the automation of work to unpack the role of AI in devising social media marketing strategies. The research design is centered on in-depth, semi-structured interviews with 20 social media professionals recruited via LinkedIn or email with a focus on achieving demographic and industry representation. The interview protocol aimed to identify a defining framework, specific strategy components, the creative process, and quality criteria for social media marketing strategies. The interviews explored the current state of social media marketing strategy creation and the potential for AI to improve productivity. Table 1 details the demographic composition of our participant cohort

ID	Job title	Industry	Gender	Age	Educatic	Exp.	Nationality	Residency	Marital	Income
#001	SoMe & Int	Fashion	Female	31	B.Sc.	4	German	Germany	Single	40-60k
#002	Global Mar	Chemistry	Female	40-50	B.A.	25	German	Germany	Single	X
#003	SoMe Stra	Music	Female	21	B.A.	4	Czech	Czech Rep	Single	<40K
#004	SoMe Man	Media	Female	30	M.A.	5	German	Germany	Single	X
#005	Global SoM	Chemistry	Male	31	B.A.	7	German	Germany	Single	X
#006	Corporate	Chemistry	Female	28	M.A.	5	German	Germany	Single	40-60k
#007	Head of Co	Packaging	Female	40-50	MBA	18	Chinese	China	X	X
#008	Digital Stra	Marketing	Male	53	A Levels	25	German	Germany	Single	>80k
#009A	Senior Pro	Beverage	Male	41	Diplom-K	15	German	Germany	X	X
#009B	SoMe Man	Marketing	Female	31	B.A.	6	German	Germany	Single	X
#010	CEO / Fou	Fashion	Female	39	B.A.	15	German	Germany	Married	>80k
#011	X	X	X	X	X	X	X	X	X	X
#012	Brand & Co	Technology	Female	54	LV2 Cert	36	British	UK	Married	X
#013	CEO / Co-I	Kitchen ut	Male	26	B.A.	8	German	Germany	Single	<40K
#014	Marketing	Automatio	Female	46	MBA	23	Chinese	China	Married	X
#015	General M	Consumer	Male	35	B. Sc.	8	Dutch	Netherland	X	X
#016	CEO / Fou	Media	Male	50	Berufsak	30	German	Germany	Single	>80k
#017	Creative S	Marketing	Female	24	M.A.	2	United Sta	United Sta	Single	40-60k
#018	PR Accour	PR & Strat	Female	24	M.A.	4	United Sta	United Sta	Single	X
#019	Marketing	Engineerin	Female	54	B.A.	30	French	Germany	X	X

TABLE 1: Demographic breakdown of participants

Following the interview, we rolled out an experiment based on ChatGPT to generate social media marketing strategies for two hypothetical companies, the first being a sustainable fashion company and the second a chemical corporation. The results of the experiment were evaluated based on the quality of the output and the potential for productivity gains. These experiments were based on the best practices listed by participants during the interviews with the objective of identifying categories, such as strategy components, the creative process, and quality criteria for social media marketing strategies. Data from the interviews and the experiments was eventually processed using clustering and thematic analysis of interviewee statements to identify recurring subcategories, as well as an evaluation of ChatGPT's output from the experiment based on previously surfaced quality criteria as preliminary categories.

The results suggest that Generative AI has considerable potential to increase productivity in creating social media marketing strategies, particularly in accelerating brainstorming processes. ChatGPT performed particularly well in proposing concrete, reasonable, and measurable ideas, as well as tailoring its output to the corporate identity of the chosen businesses. The AI tools delivered satisfactory scope for tactical and strategic adjustments by incorporating regular monitoring and feedback loops. The most salient weaknesses identified by participants were related to the realism of output regarding budget and posting frequency in content plans. Participants also raised issues with the validity of ChatGPT's answers in terms of evidential data, which remained mostly unclear due to data protection issues. Some of these limitations could be offset by deploying in-house Generative AI models like DeepSeek, with many participants mentioning that larger businesses are currently developing their own Generative AI tools that can generate social media marketing strategies without privacy limitations or concerns about proprietary information.

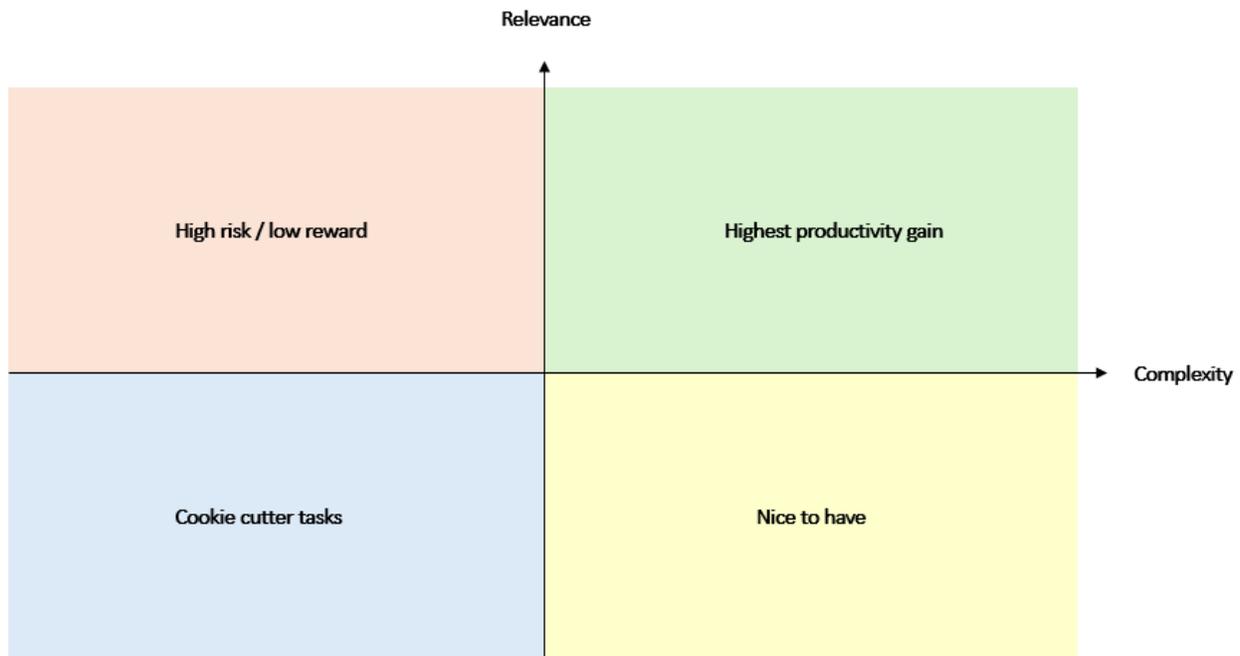


Figure 1: Relevance vs Complexity axis

Participants also noted that the output from generative AI such as ChatGPT can often appear too generic for context-specific applications, with 'cookie-cutter' responses being a tangible limitation of these tools for more sophisticated marketing campaigns. In the end, participants listed several central and peripheral components that shape marketing plans that could be organized across the perceived relevance and complexity axes for social media marketing. These axes express the tension between target audience identification and market analysis that remained consistent across interviews notwithstanding the expected variance from B2B to B2C marketing, where influencer marketing prevails. Figure 1 shows the two axes described by the interviewees.

In summary, the results support the hypothesis of Generative AI leading to increased productivity in social media marketing strategy creation, as the experiments yielded high-quality social media marketing strategies tailored to the specific needs of a company with consistent brand identity. Indeed, the AI tool could generate strategies faster and more efficiently than human professionals and could also identify potential areas for improvement in existing strategies. The results, however, also highlight the limitations in using AI for marketing campaigns, as these tools cannot fully replicate the creativity and intuition of human professionals. While we could not find evidence that AI will directly lead to widespread job losses, participants noted the potential to automate a wide range of tasks, including social media marketing strategy creation. Our results also highlight the potential risks associated with data protection and ethical considerations when using AI tools.

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