

Linköping Studies in Science and Technology
Dissertation No. 2432

Users Like You and Me

– Understanding the User-Driven Data Economy
from a Human-Centric Perspective



Martin D. Mileros

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Department of Management and Engineering

SE-581 83 Linköping, Sweden

P: +46 13 28 10 00



Abstract

With over 5 billion social media users (“users”) worldwide, digital platforms such as YouTube and Facebook have become an integral part of people’s daily lives. Many of these platforms offer “free” services, such as entertainment and social interaction, but behind these services lies a complex economic, non-monetary exchange. A specific user group, referred to in this dissertation as zero-price users, trades personal resources such as time, attention, and data instead of money to use the “free” service. At the same time, another, more active user group plays a significant role: content creators. Content creators, and especially influencers, have assumed a central role in supplying platforms with original and engaging content. What unites these two types of users is that they both participate in a distributed value creation process based on the monetization of personal assets, which positions them as economic actors in an emerging user driven data economy.

Many of the resources that users provide or exchange with other users can be utilized by platforms as economic assets. However, these resources are not perceived in the same way as traditional economic transactions. This lack of insight can lead to a range of future consequences and costs that may negatively impact users and diminish their well-being. The aim of this dissertation is therefore to explore social media users as active economic actors in the user-driven data economy from a human-centric perspective.

The research is based on a combination of qualitative and quantitative methods. Surveys are used to study zero-price users and their engagement with “free” services. For content creators, in-depth interviews are conducted, as this group represents a significantly smaller population. The study stands out by adopting a human-centric perspective. In other words, it contributes knowledge focused on enhancing user well-being, rather than prioritizing growth and innovation as companies and organizations typically do.

The results show that platform strategies, such as infinite scrolling and targeted advertising, can subtly influence user behavior and lead to various non-monetary costs. These may manifest as procrastination,

reduced self-control and stress. For content creators, the pressure from algorithms and sponsors often shifts their focus from intrinsic motivation to external performance goals, which can hinder their creativity and stability over time. Additionally, they frequently face financial uncertainty and the need to continuously push their boundaries to produce original content. This growing pressure may lead influencers to take significant risks or expose their private lives and families. The study's observations highlight how the user-driven economy not only affects individuals but also reshape markets, culture, and behaviors.

This dissertation deepens the understanding of the user-driven data economy and its implications for users by linking them to autonomy, core human values, and well-being. It also emphasizes the importance of increased transparency and ethical accountability from companies, as well as the need for users to reflect on their values, digital behaviors, and the consequences of their actions. As role models and cultural influencers, influencers specifically play a key role in shaping future norms, values, and societal trends. While this research provides a foundation for understanding this phenomenon, further studies are needed to identify additional non-monetary costs for users and develop tools and strategies that can enhance their ability to make more informed decisions regarding their current and future challenges.

Keywords

User-driven Data Economy, Digital Economy, Human-Centric, Non-monetary cost, Well-being, Creator Economy, Content Creator, Social Media Influencer, Self-Determination Theory, Motivation, Zero-Price Economy, Zero-Price Market, Zero-Price User, Personal Data, Privacy, Web 2.0, Social Media, Social Media Platform, Human-Centered, Value Exchange, User-Generated Content, Content Provider, Decentralized Economy, Industry 5.0

Sammanfattning

Med över fem miljarder användare av sociala medier (användare) världen över så har digitala plattformar (plattformar) såsom YouTube och Facebook blivit en naturlig del av människors vardag. Många plattformar av detta slag erbjuder exempelvis “gratis” tjänster, såsom underhållning och social interaktion, men bakom dessa tjänster döljer sig ett komplext ekonomiskt ickemonetärt utbyte. Till exempel byter en specifik användargrupp, som i denna avhandling benämns som nollprisanvändare, personliga resurser som tid, uppmärksamhet och data i stället för pengar mot användande av plattformar. Samtidigt spelar också en annan mer aktiv användargrupp en viktig roll, nämligen innehållsskapare. Innehållsskapare och främst så kallade influencers har fått en central roll i att förse plattformarna med originellt och engagerande innehåll. Det som förenar dessa två typer av användare är att de båda deltar i en distribuerad värdeskapandeprocess som baserar sig på monetariseringen av personliga tillgångar, vilket i sin tur positionerar dem som ekonomiska aktörer i en framväxande användardriven dataekonomi.

Många av de resurser som användarna tillhandahåller eller utbyter mellan andra användare kan nyttjas som ekonomiska tillgångar av plattformarna, vilket innebär att dessa resurser inte uppfattas på samma sätt som traditionella ekonomiska transaktioner. Denna bristande insyn kan leda till en rad framtida konsekvenser och kostnader som negativt påverkar användarna och deras övergripande välbefinnande. Syftet med denna avhandling är därmed att belysa och fördjupa sig i den användardrivna dataekonomin samt att mer specifikt undersöka konsekvenserna för de två centrala huvudanvändarna, nollprisanvändare och innehållsskapare.

Forskningen baserar sig på en kombination av kvalitativa och kvantitativa metoder, där enkäter används för att undersöka nollprisanvändare och deras användning av “gratis” tjänster. För innehållsskapare så används istället djupintervjuer då dessa respondenter är färre till antalet. Studien utmärker sig genom att anta ett människocentriskt perspektiv. Med andra ord så bidrar studien med kunskap som kan leda till ökat välbefinnande för den enskilde snarare än företagsrelaterade aspekter som ökad tillväxt och innovation.

Resultaten visar att plattformsstrategier, såsom obegränsad scrollning och riktad reklam, subtilt kan påverka användares beteenden och leda till en rad icke-monetära kostnader, exempelvis prokrastinering, nedsatt självkontroll och stress. För innehållsskapare medför trycket från algoritmer och sponsorer att deras fokus ofta förflyttas från deras inre motivation till externa prestationsmål, vilket visar sig hämma kreativitet och stabilitet över tid. Dessutom står de ofta inför en ekonomisk osäkerhet och behovet av att ständigt tänja på sina gränser för att producera originellt innehåll. Denna ökade press kan leda till att influencers tar stora risker, eller exponerar sina privatliv och familjer. Studiens observationer belyser hur användardrivna ekonomier inte bara påverkar individer utan även effekten på marknader, kultur och beteende.

Denna avhandling fördjupar förståelsen för den användardrivna dataekonomin och dess konsekvenser för användare genom att koppla dem till autonomi, människors kärnvärden och välbefinnande. Den betonar också vikten av ökad transparens och etiskt ansvar från plattformsföretagens sida, samt vikten av att användare reflekterar över sina värderingar, digitala beteenden och konsekvenserna av sina handlingar. Som förebilder och kulturella påverkare spelar specifikt influencers en nyckelroll i att forma framtida normer, värderingar och samhällstrender. Även om denna forskning ger en grund för att förstå detta fenomen, så behövs vidare studier för att identifiera fler icke-monetära kostnader för användare samt nya verktyg och strategier som kan stärka förmågan att fatta mer informerade beslut kring nuvarande och framtida utmaningar.

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Martin D. Mileros
Linköping, February 2025

~ Ad Posterios ~

List of Publications

Paper I: Content Creator based Business

The paper investigates content creator-based business relationships. It aims to characterize these business relationships and present a taxonomy of e-commerce derived from a literature review. The paper identifies and classifies eight distinct types of content creator-based business relationships in e-commerce which provides both theoretical insights and practical implications.

Mileros, M. D., Lakemond, N., & Forchheimer, R. (2019). Towards a taxonomy of e-commerce: Characterizing content creator-based business models. *Technology Innovation Management Review*, 9(10), 62-77. <https://doi.org/10.22215/timreview/1276>

Paper II: Zero-Price Users and “Free” Apps

This paper explores the trade-offs between benefits and non-monetary costs associated with zero-price services, such as “free” apps. By employing a human-centric perspective, the study investigates the value that users derive from these services while also addressing the non-monetary costs that the users incur.

Mileros, M. D., & Forchheimer, R. (2025). Free for you and me? Exploring the value users gain from their seemingly free apps. *Digital Policy, Regulation and Governance*, 27(2), 239–257. <https://doi.org/10.1108/DPRG-01-2024-0009>

Paper III: Social Media Influencers and Well-being

The paper explores paradoxical conditions of social media influencers, focusing on the health-related costs of maintaining their influence. While metrics like likes, views, and followers are often seen as measures of success, the paper highlights how these can contribute to, for instance, financial strain, and emotional fatigue. Using self-determination theory as a framework, the study identifies key contradictions, such as the balance between authenticity and professional demands, and the pressures of portraying a healthy lifestyle while facing significant personal health risks.

Mileros, M. D., Norrman, C., & Öberg, C. (2025). The health paradoxes of social media influencers. *Journal of Innovation and Entrepreneurship*, 14(12). <https://doi.org/10.1186/s13731-025-00472-1>

Paper IV: Zero-Price Users and Facebook

The paper investigates the non-monetary costs experienced by users in zero-price markets, focusing on the trade of personal data and time. This study also adopts a human-centric perspective and highlights the power imbalance between users and businesses in terms of data usage and control. The findings demonstrate how platform design influences user behavior, often leading to increased engagement and time spent, with limited awareness of the implications.

Mileros, M. D. (2019). The Other Side of the Coin: Exploring Non-Monetary Costs faced by Users in Zero-Price Markets. Unpublished manuscript. An earlier version was published in the Proceedings of the International Continuous Innovation Network Conference (CINet 2019) (pp. 288–297). Odense, Denmark: CINet. ISBN 978-90-77360-22-4

Paper V: User-Driven Data Economy

The paper characterizes the user-driven data economy and emphasizes the active role of users. The study introduces a framework to characterize emerging contexts, actors, and relationships, and also addresses conceptual ambiguities.

Mileros, M. D. (2024). Toward an Economy driven by User Resources: Exploring Contexts, Actors, and Relationships. Unpublished manuscript. An earlier version was published in the Proceedings of the International Continuous Innovation Network Conference (CINet 2024) (pp. 384–392). Hamburg, Germany: CINet. ISBN 978-90-77360-27-9

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PART I

I

1

Introduction

"We often pay too much when we pay nothing." – Dan Ariely¹

In an era where pronouns like “I,” “you,” and “we” have become central, as in brands like *iPhone* and *YouTube*, these pronouns highlight the growing role of individuals in the digital economy. These individuals engage in digital environments in ways that go beyond passive consumption by contributing to and influencing economic systems. This chapter explores how these changes create new possibilities while also presenting challenges, leading to the dissertation’s aim and research questions.

¹ Dan Ariely, *Predictably Irrational: The Hidden Forces That Shape Our Decisions* (New York: HarperCollins, 2008), p. 49.

1.1 Background

For a long time, it has been taken for granted that producers produce and provide resources to consumers. But what would it mean for the fundamental structure of society and our economic understanding if consumers instead supplied producers with resources?

Society is in constant transformation, and many of the people on the planet have witnessed several shifts in our lifetime that have also reshaped the systems we rely on. One example is the internet and the rise of the digital economy, which has connected people and information on a global scale (Benkler, 2006; Kaplan & Haenlein, 2010; Tapscott & Williams, 2007). Another example is social media and the introduction of apps, which have further changed how we communicate and consume information (Aichner et al., 2021). Additionally to this, new technologies, such as artificial intelligence (AI), have started to play an increasingly significant role and carry the potential to fundamentally alter how we work, communicate, and consume (Kaplan & Haenlein, 2020).

These changes often begin with challenges, such as the rise of music and movie piracy, but lead to innovations that address these issues, like the creation of digital platforms such as Spotify and Netflix. These platforms have made creative content more accessible in user-friendly and legal ways, even though certain issues remain (Tunca, 2013; Y. Wang et al., 2017), such as how artists are compensated. At the same time, digital platforms have become more flexible and individualized, leading to the emergence of social media platforms (“platforms”). The major shift here is no longer about controlling resources like music and film but rather about focusing on social media users (“users”) and, more specifically, their personal resources (Benkler, 2006). Unlike the earlier digital economy, where communication primarily flowed in one direction from companies to consumers through websites, this new phase is characterized by communication that moves in multiple directions, between companies and users as well as between users themselves (O’Reilly, 2007; Tapscott & Williams, 2007). This enables personal data, preferences, and creative work to flow into the digital system and be shared through digital platforms that act as intermediaries.

1.2 Toward a User-Driven Economy

The starting point for research on individuals and their economic perspectives can be traced back to the 1950s, when Simon (1957) examined how people process and handle information. Simon introduced the theory of bounded rationality, which suggests that people's decision-making is influenced by the information available to them, their cognitive capacity, and the time they have to make decisions. He concluded that instead of optimizing, individuals often settle for a "good enough" solution that meets their minimum requirements, a behavior he called satisficing. This demonstrates that decisions in real situations are rarely fully rational but are shaped by uncertainty and practical constraints. This way of thinking was further developed in the 1970s and led to prospect theory (Kahneman & Tversky, 1979). This theory explains how people make decisions under uncertainty and shows that they evaluate gains and losses differently. According to the theory, people are more sensitive to losses than to equivalent gains, a phenomenon known as loss aversion. Further on, in the early 2000s, experimental studies explored how people perceive "free" products (Ariely, 2008). Ariely highlights the Zero-Price Effect, which shows that "free" not only reduces costs but also changes how people perceive value. For example, individuals tend to overvalue something that is "free," even when a low-cost alternative is objectively better (Ariely, 2008).

More recent research has expanded these initial perspectives and identified a number of new research directions. For instance, the handling of personal data has received significant attention. Acquisti et al. (2015) and Solove (2008) have shown that users often underestimate the risks of sharing personal information and that complex privacy policies make it more difficult to make informed decisions. This underscores the need for greater transparency, even though ongoing debates remain about whether the responsibility should fall on users or platforms. Within a related research field, Spiekermann and Korunovska (2017), Laoutaris (2019), and Malgieri and Custers (2018) have examined how personal data is valued, highlighting both economic and ethical dimensions. The studies indicate that users' perception of value often differs from its commercial worth, raising continued discussions on how this value should be measured and protected, particularly for services that appear to be "free." Fan et al. (2022), Dallas and Morwitz (2018), and Newman (2015) have

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addressed this issue, emphasizing that these services involve significant non-monetary costs, such as loss of privacy, cognitive overload, and unwanted influence on users' time and attention. While there is broad agreement on the importance to protect personal data and privacy, questions remain about how to achieve this without compromising the user experience.

A related perspective to personal data and privacy concerns users' attention, which Zeldes (2014) describes as a limited resource. Platforms compete intensely for this attention, which, according to Zeldes, can lead to information overload and stress. Although the centrality of attention was first studied by Simon (1957) in the 1950s, there are differing views on how best to protect it from exploitation. For instance, some researchers argue that stricter regulation is needed to prevent manipulative design practices that exploit human thought patterns and decision-making tendencies (Malgieri & Custers, 2018), while others emphasize individual responsibility and self-regulation through tools such as focus modes and app time restrictions (Newman, 2015). Furthermore, Fan et al. (2022) highlight that many platform-driven efforts to reduce digital distractions are often superficial, as they do not address the underlying business incentives that prioritize engagement maximization. Taking these issues one step further, Zuboff's (2019) theory of surveillance capitalism situates them in a broader context.

Surveillance capitalism can be described as an economic model where companies collect and analyze human behavioral data to forecast and influence future actions for profit. According to Zuboff (2019), this process undermines both autonomy and privacy, raising questions about whether this is an acceptable trade-off for digital services or a serious threat to democratic principles. In line with this stream of research, researchers such as Gray et al. (2018) and Bösch et al. (2016) have drawn attention to so-called dark patterns, deceptive design practices that manipulate users into making unintended decisions, often creating misleading choices, or taking advantage of common decision-making tendencies.

A complementary view to surveillance capitalism and dark patterns comes from Hari (2019), who argues that extrinsic goals, such as social prestige and financial success, tend to be less fulfilling than intrinsic

motivations like meaningful relationships and personal growth and only lead to “empty values”. This is specifically relevant for so-called social media influencers (“influencers”). Influencers can be seen as individuals who, through their presence and activity on social media platforms, shape their followers’ consumption habits, opinions, or behaviors (Brake, 2014; Petre et al., 2019). However, influencers behavior and working conditions also comes with backside. For instance, Baccarella et al. (2018) analyzed the balance influencers must maintain and how this affects their mental health. Their research highlights the impact of stress and the risk of burnout, drawing attention to the mental and emotional costs of maintaining credibility while meeting commercial demands.

Based on this background and with support from my earlier work I identified that the focus is no longer solely on companies producing resources for users, but also on users providing resources to companies (Mileros, 2020: p. 47). The conclusion from this work, which sets the baseline for this dissertation, was that these users may represent a new economic actor, one that cannot be fully understood or examined using traditional tools and methods. For instance, these new resource providers constitute a group of users that are not driven by innovation and growth but by other drivers that make them willing to invest personal resources. The perspective taken in the dissertation can also be seen as an interplay of value creation between users and companies, such as social media platforms, marketers or sponsors.

However, a key aspect of this value creation is that it is mainly based on users’ personal resources, meaning that other types of “free” digital services, such as parking apps are excluded. Furthermore, two specific groups of users emerged as central; users that utilize “free” services (Botta, 2018; Mileros, 2020; Newman, 2013) which in this dissertation are referred to as zero-price users, and content creators who provide more original and compiled pieces of data such as videos, images and blogs (Kaplan & Haenlein, 2010; Mileros et al., 2019; Van Dijck, 2009). Based on these foundations and insights, these groups will therefore be examined in greater depth and connected to existing research gaps in the literature.

Chapter 1

Platforms and companies continuously strengthen their positions through new tools and insights, while similar support for the users is largely absent. To highlight more fairly the role as users, clearer frameworks and definitions are needed. Research also lacks a deeper analysis and understanding of the interplay between users, companies, and other stakeholders. Terms such as “consumer,” “content creator,” and “information provider” are used inconsistently, which limits the understanding of users’ unique positions (Conde & Casais, 2023; Kaplan & Haenlein, 2010). Other terms, such as “internet contributors” (Van Dijck & Nieborg, 2009) and “individuals” (Campbell & Grimm, 2019), further reinforce this terminological fragmentation. A unified conceptual framework and theoretical foundation is therefore necessary to analyze users’ contributions from a broader economic perspective. Based on this, it becomes evident that a holistic perspective on users as economic actors is needed. Therefore, I summarize this gap as a human-centric perspective on the user-driven data economy.

Another aspect is that users’ contributions, such as creative work, social engagement, and attention, generate substantial value for platforms, even though these non-monetary aspects often are less visible. Zuboff (2019) have highlighted negative consequences such as loss of privacy and stress, while Couldry and van Dijck (2015) have raised ethical concerns regarding the lack of transparency related to personal data and attention. Hence, a more unified understanding of users’ personal investments is still missing. Taken together, I summarize this research gap as users’ value creation and non-monetary costs.

In the light of these gaps, a human-centric perspective becomes particularly relevant. This perspective is essential for uncovering the link between users’ intentions and platforms’ commercial goals, where design strategies or marketing strategies currently often take advantage of these users (Bösch et al., 2016; Couldry & van Dijck, 2015). Against this background, the aim of this dissertation is formulated as follows:

To explore social media users as active economic actors in the user-driven data economy from a human-centric perspective.

1.3 Research Questions

The gap regarding users' non-monetary value creation and costs are challenging to address, which is why it has been broken down into two research questions. These questions specifically examine this issue from the perspectives of zero-price users and content creators. The current literature has not sufficiently examined how these costs, such as attention, privacy risks, fatigue, and emotional burden, impact users from a human-centric perspective.

Starting with zero-price users, previous research has primarily examined personal data from a commercial value perspective, where user data is viewed as a resource for companies. (Laoutaris, 2019; Malgieri, 2018; Spiekermann et al., 2015; Zuboff, 2019). However, there is a lack of deeper understanding regarding how zero-price users experience and handle the non-monetary costs associated with data collection done by the platforms. Studies by Malgieri and Custers (2018) and Newman (2018), for instance, have highlighted issues related to user data and privacy, yet few empirically grounded insights exist on how these non-monetary costs impact users' perception of control over their digital presence.

Furthermore Zuboff (2019) have identified how the business models of social media platforms are built on surveillance capitalism and manipulation to influence user behavior and thereby maximize commercial profits. These models are designed to drive engagement and boost revenues, often creating a conflict with users' own motivations, such as personal well-being and self-determination. Fumagalli et al. (2018) describe how this system forces users into a role where their digital expression becomes a resource for the platforms' economic gain, while Malgieri and Custers (2018) note that these strategies often compromise users' privacy. Furthermore, Wottrich et al. (2018) show how users are frequently compelled to balance perceived app value against privacy intrusions, further blurring the line between users' personal interests, and the commercial goals of the platforms. Based on this, a more human-centric perspective is needed to clearly distinguish the motivations and objectives of platforms from those of zero-price users, to better grasp the consequences for users. From these gaps I have formulated my first research question as:

RQ1: How can non-monetary costs faced by zero-price users be understood from a human-centric perspective?

While zero-price users deal with hidden costs tied to platform engagement, content creators face their own but related challenges. The creator economy has turned digital platforms into marketplaces for monetized creativity, which comes with significant trade-offs. The market for creators has grown significantly (Geyser, 2022) during recent years and a study conducted in 2019 indicated that nearly 30 percent of American children aged 8 to 12 selected “YouTuber” as their top career choice². Despite this growth, much of the research has centered on influencers’ marketing value while overlooking human-centric costs such as emotional strain, cyberbullying, and privacy concerns (Baccarella et al., 2018; B. Duffy & Wissinger, 2017). These pressures also expands to include expectations from followers and sponsors which also have been shown to significantly impact the well-being of influencers (Belanche et al., 2021; B. Duffy & Wissinger, 2017).

Traditional marketing research has primarily focused on surface-level metrics such as follower counts and financial success factors (Campbell & Farrell, 2020; Gräve, 2019; Haenlein et al., 2020; Vrontis et al., 2021). For instance, Campbell and Farrell (2020) have focused on the role of influencers as marketing tools and their ability to create value for companies by building strong relationships with their followers. Existing literature has thus emphasized business value creation motives and interests within the digital marketing economy, often neglecting how these strategies affect influencers’ working and their value creating process (Cunningham and Craig, 2019; Duffy and Wissinger, 2017). In addition, some influencers also face additional ethical concerns, often being exploited to promote unhealthy products (Alruwaily et al., 2020; Bishop, 2021). Despite some awareness of these challenges, much of the existing research focuses on external success metrics, failing to address the deeper human costs of being an influencer. Based on these knowledge gaps I have formulated my second research question as:

² <https://www.washingtonpost.com/technology/2023/11/07/kids-youtuber-influencer-camps-creators-learn-how/>

RQ2: How can non-monetary costs associated with the work of content creators, particularly social media influencers, be understood from a human-centric perspective?

To further elaborate on how these research questions are addressed, this dissertation is structured around five research papers (see Chapter 4), each contributing insight into the user-driven data economy and its implications for zero-price users and content creators. Paper I includes a literature review that lays the foundation for the understanding of the user-driven data economy. It identifies the key concepts that shaped the aim of this dissertation. Papers II and IV are both in-depth studies based on surveys, aiming to examine the non-monetary costs for zero-price users. These papers address non-monetary costs and a human-centric perspective on zero-price users (RQ1) by exploring how users perceive the trade-offs associated with zero-price services. Paper III further investigates the non-monetary costs and consequences for influencers. Based on a qualitative study with semi-structured interviews, this paper addresses the well-being and working conditions of influencers (RQ2), examining the balance between autonomy and external control among content creators. Finally, Paper V builds upon the previous studies by integrating findings from both zero-price users and content creators. Through a literature review, this paper provides a broader understanding of the user-driven data economy and its structural implications. The relationship between these papers, the research questions, and the aim of the dissertation is illustrated in Figure 1.

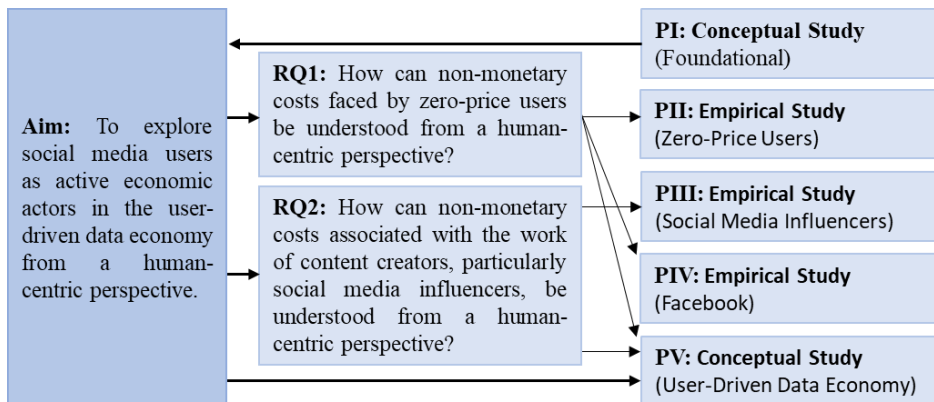


Figure 1. The connection between the aim, research questions, and associated papers.

1.4 Delimitations

Four delimitations have been made. *First*, the study is geographically narrowed to examining the user-driven data economy within Sweden. By limiting the study to Sweden, a specific set of cultural, legal, and socio-economic factors influencing user behavior is considered. Sweden's high level of digitalization, robust data protection regulations (such as GDPR), and significant social media engagement provide a unique and relevant context for exploring the user-driven data economy.

Second, the study is temporally delimited to data and trends spanning from the early 2000s to late 2024. As the user-driven data economy evolves in response to technological and societal changes, this temporal scope ensures that the findings stay accurate and relevant within this defined timeframe.

Third, the generation of data by users for the training of AI- algorithms has received increasing attention. This dissertation excludes this specific aspect of data generation as it is of more interest for the platforms than the users.

Fourth, the connection between blockchain technology and the user-driven data economy, as well as its adoption by content creators, was addressed in my licentiate thesis and also touched upon in Paper I. That work focused on issues such as ownership and rights, the ability to verify the origin of creative works, and the management of compensation and donations from users. However, blockchain technology is excluded in favor of the in-depth exploration of zero-price users and content creators.

1.5 Outline

This dissertation is divided into two main parts. Part I encompasses the covering paper and Part II comprises the five appended research papers which are referred to using Roman numerals. The covering paper, often referred to as the “kappa,” is structured as follows:

- ❖ **Chapter 1:** Introduces the core concepts of the dissertation, such as the user-driven data economy, zero-price users, and content creators. This chapter also presents the aim, research questions, delimitations, and the outline of the dissertation.
- ❖ **Chapter 2:** Describes the emergence of the user-driven data economy. It includes a foundational background covering the era of information and the era of participation. The chapter presents the theoretical framework, focusing on zero-price users and content creators’ non-monetary costs, introduces a human-centric perspective, and concludes with an analytical model for the dissertation’s analysis.
- ❖ **Chapter 3:** Describes the research methodology, including the starting point, research design, initiation and adjustment phase, data collection phase, data analysis phase, paper writing phase and own contributions, framework for analysis, and scientific rigor and reflections.
- ❖ **Chapter 4:** Constitutes a summary of the five appended research papers and their contribution to the “kappa”.
- ❖ **Chapter 5:** Consists of an analysis and discussion with the intention of answering the dissertation’s research questions. It includes zero-price users and non-monetary costs, content creators and non-monetary costs, and a synthesis of non-monetary costs faced by social media users and social media users in the user-driven data economy.
- ❖ **Chapter 6:** This chapter presents the dissertation’s concluding remarks, summarizing key findings and discussing implications for research, social media users, platform companies, sponsors, and policymakers. It ends by addressing study limitations and suggesting directions for future research.

2

Theoretical Background and Frame of Reference

*“What information consumes is rather obvious:
it consumes the attention of its recipients.” – Herbert Simon³*

This chapter provides the theoretical background and framework for the dissertation. Section 2.1 aims to provide a foundational background to the phenomenon and its emergence, as well as clarify concepts such as Web 2.0, digital platforms, user-generated content, and social media. Section 2.2 then presents the dissertation’s frame of reference, introducing self-determination theory, zero-price users and content creators, as well as the human-centric perspective. The chapter concludes with Section 2.3, which outlines the dissertation’s analytical model.

³ Herbert A. Simon, *Designing Organizations for an Information-Rich World*, in M. Greenberger (Ed.), *Computers, Communications, and the Public Interest* (Baltimore, MD: The Johns Hopkins Press, 1971), p. 40.

2.1 Background and Conceptualization

2.1.1 *The Era of Information*

The term “digital,” originating from references to fingers and toes in ancient times, has evolved significantly, now defining the technological world we interact with today. Foundational contributions from scholars such as Alan Turing, the father of computer science, and Claude Shannon (1948), who introduced the concept of the “bit” (binary digit), laid the groundwork for the modern digital era. Despite these early milestones, it was not until the advent of the Internet on October 29, 1969, that the digital world as we know it began to take shape. On that day, ARPANET (Advanced Research Projects Agency Network), developed by the U.S. Department of Defense, successfully transmitted information between two computers for the first time. Another major step in this digital development came 20 years later, when Tim Berners-Lee introduced the HTTP protocol in March 1989. This innovation led to the public release of the World Wide Web software on April 30, 1993⁴ (Berners-Lee, 1989). The web allowed users to access interconnected hypertext documents via web browsers, making information easily accessible. Initially, it was primarily home users who started to create personal “websites,” but soon businesses, especially small ones, realized the value of an online presence, allowing them to appear comparable to larger companies. This development led to the rise of “e-commerce,” which opened up new business opportunities (Timmers, 1998; Zwass, 1996).

However, this period also introduced challenges, particularly for the music and film industries, as digital piracy became a significant issue (Bustinza et al., 2014; Tunca, 2013). The ability to share information freely online, often bypassing copyright protections, disrupted traditional business models (McConaghy et al., 2017). For example, pioneers Sean Parker and Shawn Fanning introduced Napster (Y. Wang et al., 2017), which was based on peer-to-peer (P2P) technology. Users could suddenly share copyrighted material directly with each other without any compensation being paid to the copyright holders (Jerome, 2013; McConaghy et al., 2017; Tapscott & Williams, 2007; Y. Wang et al., 2017).

⁴ <https://home.cern/science/computing/birth-web>

2.1.2 The Era of Participation

The above describing the first era of the web (Web 1.0), characterized by the distribution of information and a one-directional flow of data from businesses to consumers, came to an unexpected halt with the dot-com crash in March 2001 (O'Reilly, 2007). This economic downturn led to a greater focus on technological advancements, setting the stage for the next generation of the web, referred to as Web 2.0 (O'Reilly, 2007; OECD, 2007). According to Busalim and Hussin (2016) Web 2.0 can be characterized by two specific features. First, that the general websites could be tailored to individual user needs, and second, companies could also collect feedback from the user behavior on the websites. In general, the emergence of Web 2.0 is broadly seen as the transition from static websites to dynamic web applications (Harrison & Barthel, 2009; O'Reilly, 2007; T. Singh et al., 2008). Through these applications, information could flow from consumers to companies and between different individuals which to Kaplan and Haenlein (2010) not only represented a shift in technology, but also a change in ideology. One of the largest shifts from the Web was according to Singh et al. (2008) that Web 2.0 was more user-centered. Another perspective was provided by Tapscott and Williams (2007: p. 37), who suggested that Web 2.0 is about people creating, sharing, and socializing, i.e., “*participating rather than passively receiving information.*” By this view Web 2.0 can thus be seen as a transition from the user as a consumer to the user as a participant (Tapscott & Williams, 2007; Zwass, 2010). Taken together, the second generation of the web is characterized by participation and a multidirectional flow of data through digital platforms to a variety of users. Furthermore, Web 2.0 has also given rise to new fundamental concepts such as digital platforms, user-generated content and social media which will be explained in more detail (Hajli, 2013; Harrison & Barthel, 2009; T. Singh et al., 2008).

Digital platforms allow users to share resources like creative works, interact with other users, as well as providing insights about service usage and user behaviors to the digital platform owners (Hajli, 2013; Harrison & Barthel, 2009; Kenney & Zysman, 2016; T. Singh et al., 2008). These digital platforms have several advantages, such as facilitating the exchange of products or services, improving accessibility, speed, efficiency, user experience, and convenience (Korhonen et al., 2017). The emergence of digital platforms has thus on the one hand led to a stronger

centralization while on the other hand also offered a solution to the piracy problem by providing high-quality content and greater convenience for consumers (Tunca, 2013; Y. Wang et al., 2017). An interesting aspect of digital platforms is that the content that is offered through these digital platforms is mainly created and uploaded by the users themselves. This content provided by the digital platform users has commonly been referred to as user-generated content (Kaplan & Haenlein, 2010; Postigo, 2016; Santos, 2022).

User-generated content is primarily described as encompassing various types of data such as text, images, sound, video clips, and combinations thereof, with the more creative and original data potentially falling under copyright law (Barnes, 2002; Kaplan & Haenlein, 2010; OECD, 2007; Van Dijck, 2009). In this context, a user is seen as someone who interacts with a digital platform or service (Boyd & Crawford, 2012). User-generated content can, for example, consist of YouTube videos, Facebook posts, reviews, advertisements, or blogs (Dhar & Chang, 2009; Kaplan & Haenlein, 2010). Traditionally, since the mid-2000s, user-generated content was defined based on three criteria. First, “*it had to be published either on a publicly accessible website or on a social network accessible to a selected group of people*”; second, it had to show “*a certain level of creative effort*”; and third, it had to be “*created outside of professional routines and practices*” (OECD, 2007: p. 18). However, Kaplan and Haenlein (2010: p. 61) broadened this narrow view of user-generated content and defined it as “*the sum of all the ways people use social media.*” This definition has nowadays been elaborated by Santos (2022: p.1) who provided the following updated definition: “*any kind of text, data or action performed by online digital systems users, published and disseminated by the same user through independent channels, that incur an expressive or communicative effect either on an individual manner or combined with other contributions from the same or other sources.*”

Finally, *social media* is challenging to define and there is currently no single, widely accepted definition. Instead, multiple definitions exist within the academic community (Aichner et al., 2021; Ouiridi et al., 2014). For example, Carr and Hayes (2015: p. 50) describe social media as “*Social media are Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real-time*

or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others” (Carr & Hayes, 2015). These interactions can occur in real-time or asynchronously, engaging both broad and narrow audiences who find value in user-generated content and the perception of interaction with others. Similarly, Lai and Turban (2008: p. 389) define social media as *“online platforms and tools that people use to share opinions and experiences including photos, videos, music, insights, and perceptions with each other,”* while Kaplan and Haenlein (2010: p. 61) chose to define social media as *“a group of internet-based applications built on the ideological and technological foundations of Web 2.0.”* Furthermore, and looking back to its roots, Aichner et al. (2021) found that the concept was already used in 1994 in an online environment in Tokyo. However, many substitutes emerged during the upcoming years, for instance “virtual communities,” “social networks,” “social network services,” “online social networks,” “social networking sites,” and “social networking platforms” (Aichner et al., 2021; DeNardis & Hackl, 2015; Kaplan & Haenlein, 2010).

In general, several distinctive characteristics of social media in relation to traditional media can be highlighted. *First*, social media operates in a multi-directional transmission model, also allowing real-time interaction between users, while traditional media operates under a monologic transmission model with one source and many receivers, for instance radio, TV broadcasts, or physical newspapers (Vanmeter et al., 2015). *Second*, by utilizing social media, essentially anyone can produce and distribute content in contrast to traditional media which mainly is governed by censorship by a small group of gatekeepers (publishers) (Gatautis, 2017; OECD, 2007). *Third*, social media allows a broader range of voices and perspectives to be represented and heard, compared to traditional media which are often dominated by a few large corporations (Hermida, 2010). Based on the above, social media in this dissertation is seen as an umbrella term emphasizing the multi-directional transmission model of digital platforms with many sources and many receivers, which facilitates a greater interactivity and engagement among its users.

2.2 Frame of Reference

In this section, I will begin by examining the challenges faced by social media users, specifically zero-price users and content creators. This is followed by a description of the human-centric perspective, how it differs from a business-centric perspective, and how human-centric values can be determined. The chapter ends with a section that interconnects the frame of reference with the research questions and research aim to form the analytical model of this dissertation.

2.2.1 *Social Media Users*

We live in a digital era where more than 5 billion people⁵, accounting for over 60% of the world's population⁶ are social media users. A social media user is often defined as an individual who engages with platforms such as YouTube, Facebook, or Instagram to interact with others, share information, create content, or consume content shared by others (Aichner et al., 2021; DeNardis & Hackl, 2015; Kaplan & Haenlein, 2010). Although this broad definition includes marketers and organizations, this dissertation specifically focuses on individuals' use of social media. Social media platforms have mainly built their businesses around the interactivity and collaboration of the users (Aichner et al., 2021; Carr & Hayes, 2015; Hajli, 2013; Kenney & Zysman, 2016). These services are often provided for “free,” where users instead pay with personal assets such as time, attention, and data (Botta, 2018; Jarman & Örsal, 2020; Zuboff, 2019). In this dissertation, this group of users is referred to as zero-price users. This excludes, users that pay for premium services. Premium services that require direct monetary payment often come with benefits such as stricter management of personal data and an ad-free user experience (Wagner et al., 2014). For instance, YouTube⁷, with 2.7 billion active users as of January 2024, has approximately 97% zero-price users and only 3% users that utilize premium services (80 million), as illustrated in Figure 2.

⁵ <https://www.statista.com/statistics/617136/digital-population-worldwide/>

⁶ <https://www.worldometers.info/world-population/>

⁷ <https://www.globalmediainsight.com/blog/youtube-users-statistics/>

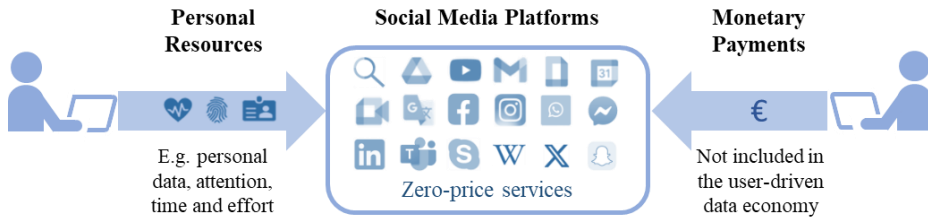


Figure 2. A breakdown of YouTube users where 97% are zero-price users and 3% premium users.

Among both zero-price users and premium users, there is a key subcategory: content creators. These individuals, that could be exemplified as YouTubers, bloggers, and vloggers, produce creative material that drives engagement and activity on platforms (Brake, 2014; Wan et al., 2017). These content creators make up about 1.5% of the total user base on YouTube.

Benkler (2006) highlights how lower costs and better access to tools have made it easier for more people to create high-quality content, lowering the threshold for participation. By producing engaging material, these content creators play a central role in the user-driven data economy (Ashman et al., 2018; Berryman & Kavka, 2018; A. Duffy & Kang, 2020; Shah et al., 2023).

Within the category of content creators, a particularly relevant subgroup is social media influencers. Influencers are individuals who have built a large group of followers and often monetize their content through sponsorships or collaborations (Campbell & Grimm, 2019; Thomas & Fowler, 2023). According to Enke and Borchers (2021: p. 7), influencers are *“third-party actors who have established a significant number of relevant, high-quality relationships and influence over various stakeholders through content production, distribution, interaction, and personal branding on social media.”* Some researchers also distinguish between traditional celebrities and native influencers who have gained fame exclusively through social media, referred to as micro-celebrities. These micro-celebrities emerge on social platforms, where they develop the activity that makes them well-known (Belanche et al., 2021; Jerslev, 2016).

Taken together this dissertation handles four types of users and their characteristics:

1. *Social media users*: Individuals who use digital platforms to interact, consume, create, and share content. This includes both regular users, who primarily engage with social media for personal purposes, and influencers, who actively participate, build a significant following, and sometimes monetize their presence. Companies and organizations are not included in this definition, as the focus is on individual usage.
2. *Zero-price users*: A subcategory of social media users. These users access platforms in exchange for personal data and attention, rather than monetary payment. In contrast, some users pay for services, often gaining benefits such as stricter data management and an ad-free experience.
3. *Content creators*: A subcategory of social media users. This includes individuals or groups who produce creative content, engage audiences, and drive platform activity. In this dissertation, content providers, organizations or companies that distribute content on a large scale, are not included, as they differ from individual creators.
4. *Social media influencers*: A specific subcategory of content creators who act as personal brands and monetize their influence. Micro-celebrities are influencers who have gained recognition entirely through their influencer role, rather than through external fame, such as for example professional athletes.

The following section will further explore the advantages and challenges faced by zero-price users, content creators, and influencers.

2.2.2 Zero-Price Users

The term zero-price users is not an established concept, but it has been introduced in the study to clearly distinguish users who utilize “free” services and thereby can be distinguished from further types of users such as social media users, which is a much broader concept. Instead of paying by monetary means, these users spend a part of their personal resources, such as their time, attention, and personal data (Evans, 2011; Newman, 2015). This model may seem appealing to users as they gain access to

services like social media platforms and creative content platforms without any direct financial cost. However, the non-monetary costs within these zero-price models are significant and can include time spent filling out surveys, watching advertisements, dealing with unwanted spam, and managing the personal information they share with these platforms (Dallas & Morwitz, 2018). According to Newman (2018) users often underestimate the actual price they are paying, believing they are receiving something valuable for “free,” only to later discover that they spend far more in non-monetary terms than they anticipated. This phenomenon is linked to what is known as the zero-price effect, where demand increases disproportionately when the price drops to zero, highlighting consumers’ strong preference for “free” offerings (Ariely, 2008; Newman, 2013; Nicolau, 2012).

There is also another related effect that applies to zero-price users, the endowment effect. This effect suggests that individuals tend to overvalue what they already own, which also contributes to this behavior. As a result, users often demand more to give up their “free” services than they would be willing to pay to acquire them (Dinsmore et al., 2021; Solove, 2021; Winegar & Sunstein, 2019). This psychological tendency thus implies that once users become accustomed to the “free” access offered by platforms, they place a higher subjective value on these services, making it even harder for them to recognize the true costs they incur through time, data, and attention.

The addressed non-monetary costs addressed above, particularly those connected to price-free services, refer to services without a price but not necessarily without costs. These are in some cases also referred to as pseudo-free (Dallas & Morwitz, 2018) and in this dissertation are marked as “free.” Furthermore, when a service lacks both price and cost it can be seen as being cost-free or also referred to as being truly-free (Dallas & Morwitz, 2018). For instance, Wikipedia or open-source software can often be seen as being cost-free for some zero-price users as these social media platforms rely on donations or community contributions rather than personal data or attention for revenue (Evans, 2011; Newman, 2015). This non-monetary distinction is not immediately apparent to users, resulting in that many of the most popular digital platforms use price-free practices that do not explicitly state the actual cost of participation (Fan et al., 2022; Newman, 2018).

One of the most significant areas affected by zero-price services is users' *privacy*. When individuals share their personal data with digital platforms, they risk losing control over some privacy. Privacy can be seen as individual's right to protect themselves from unwanted intrusion and manage how their data is shared (Acquisti et al., 2015; Solove, 2008). However, the increasing complexity of privacy policies and the widespread collection of data have made it difficult for users to fully understand the consequences of sharing their information. Esteve (2017) emphasizes that privacy policies are often vague and vary widely, making it hard for users to make informed decisions about how their data is used. Despite the high value people place on their privacy, they often willingly trade it for short-term benefits, such as discounts or personalized services (Acquisti et al., 2015).

Wang et al. (2016) explain that the trade-off between privacy and convenience is often viewed as a rational choice by users, who perceive that the immediate benefits outweigh the long-term risks of data exposure. This phenomenon is seen in the "privacy paradox," where users express concern over their privacy but take minimal action to protect it (Acquisti et al., 2016; Norberg et al., 2007). The willingness to share data for convenience also extends to more sensitive contexts. For instance, parents sharing pictures of their children online create a digital footprint that their children cannot control, a practice now known as "sharenting." Baccarella et al. (2018) argue that this raises important questions about children's privacy, particularly concerning their right to manage their digital identity.

In addition to concerns about privacy, the value of *personal data* has become increasingly central in today's digital economy. Personal data is defined as *any information that can be linked to an individual, either directly or indirectly* (Birch et al., 2021; Bustard, 2015; European Commission, 2016; OECD, 2013). While users often view the data they provide as relatively insignificant, companies consider it a valuable asset that can be monetized in various ways (Newman, 2015). Companies frequently measure personal data using metrics like Average Revenue Per User (ARPU), which allows them to quantify the economic benefits of collecting and analyzing user data (Birch et al., 2021). However, as Malgieri and Custers (2018) point out, there is a significant discrepancy between how companies value personal data and how users perceive its

worth. The privacy paradox complicates this further, as users often undervalue the long-term consequences of sharing their data. For zero-price users, this challenge becomes even more pronounced, as managing personal data in such environments is particularly difficult. For instance, websites offering questionable services often appear credible but may collect and use personal data in ways that violate users' privacy. Spiekermann et al. (2015) point out that many online platforms are designed to maximize data collection without fully informing users of the consequences. This lack of transparency creates a power imbalance between users and companies, as users often do not understand how their data is collected, stored, or used (Li et al., 2014; Newman, 2015). Fumagalli et al. (2018) further note that, unlike physical products, personal data can be sold multiple times without losing its value. This repeated trade of data, often without the user's awareness, increases the risks associated with data sharing in zero-price markets.

Apart from personal data, *time* (i.e., cost of time) is a central resource that zero-price users unknowingly trade. Research by Dallas and Morwitz (2018) suggests that individuals are often more willing to spend time than money on enjoyable activities like using social media. In zero-price markets, the complexity of cost information makes it difficult for users to recognize the opportunity costs of their time (Newman, 2015). An opportunity cost refers to the value of the best alternative foregone when a choice is made, representing the benefits that could have been gained from the next best option (Stone, 2015). Nevertheless, as Whiting and Williams (2013) note, many users consciously engage with social media for entertainment and relaxation, finding immediate value even if the long-term opportunity costs remain less visible.

Besides time, many platforms rely on the "attention cycle" to keep users engaged for extended periods, often employing addictive design elements to capture and retain attention (Newman, 2020). *Attention* (attention cost) in this dissertation refers to the *effort that users spend on social media platforms, often unwittingly, through engagement with ads or by providing content* (Elvy, 2017; Newman, 2015; Zeldes, 2014). This cost complicates the exchange, as platforms leverage users' attention to generate revenue. To retain this attention and connection to the services, digital platforms often exploit user behavior through so-called dark patterns, i.e., design strategies that affect users into taking actions that

benefit the platform (Bösch et al., 2016; Newman, 2020; Sheil et al., 2024). These patterns, such as “Roach Motel” and “Privacy Zuckering,” betray users into giving more personal information or spending more time than they had intended. For example, the roach motel design makes it easy for users to sign up for a service but difficult to unsubscribe, a practice observed on various social media platforms. Privacy zuckering involves misleading users into sharing more personal data than they originally planned, named after aggressive privacy policies associated with certain platforms.

Furthermore, some platforms have also implemented features such as “streaks⁸.” For instance, on Snapchat users are rewarded for maintaining daily interactions and the streaks create a sense of obligation that encourages continuous engagement. Another related platform feature utilized by digital platforms is the lack of stopping cues, further encouraging prolonged engagement. A stopping cue is a signal that typically encourages a user to pause or stop an activity (Natarajan, 2024). For example, in traditional forms of media like books, the end of a chapter signals a natural point to stop reading. However, in digital environments, platforms often eliminate these cues to maximize user engagement. Features like infinite scroll and autoplay, which continuously serve new content, are prime examples of how stopping cues are removed. Without these cues, users are more likely to engage longer than they originally intended (Natarajan, 2024). Dark patterns, combined with the absence of stopping cues, are a potent mix for keeping users engaged beyond their conscious intent.

Finally, targeted advertising, which relies on the collection of personal data, allows companies to deliver advertising that is more personalized and relevant to individual users, making them more valuable than generic advertising (DeNardis & Hackl, 2015). However, this personalization raises ethical questions, as the line between offering useful information and manipulating user behavior can become blurred (Zuboff, 2019).

⁸ <https://help.snapchat.com/hc/en-us/articles/7012394193684-How-do-Snapstreaks-work-and-when-do-they-expire>

2.2.3 Content Creators and Social Media Influencers

The content creator market has expanded rapidly, and as this growth continues, social media influencers have become a central part of digital marketing strategies (Rishi & Bandyopadhyay, 2018). The annual influencer market is valued at approximately \$16.4 billion and continues to grow at a fast pace (Geyser, 2022). Platforms such as YouTube, Instagram, and blogs have thus become key channels for businesses to reach their target audiences (Campbell & Farrell, 2020; De Veirman et al., 2017; Vrontis et al., 2021). While extensive research has explored marketers' strategies for leveraging influencers (Campbell & Farrell, 2020; De Veirman et al., 2017; Vrontis et al., 2021), there is a clear gap in the literature regarding influencers themselves and their individual paths toward sustainable success.

Besides their financial concerns, influencers must also manage their credibility and trustworthiness while influencing their followers' consumption decisions through parasocial, one-sided relationships (Conde & Casais, 2023; Han & Balabanis, 2024). These relationships are built on an individual's perceived connection or engagement with a public figure, despite the absence of a real reciprocal interaction. For influencers, this can create increased pressure to share private aspects of their lives to maintain followers' interest and continued growth, which in turn can lead to some followers crossing boundaries, creating emotional strain (Marwick, 2015).

Furthermore, content creators' success is often measured through quantitative metrics such as follower count, engagement levels, and conversion rates (Campbell & Grimm, 2019). However, these metrics fail to capture qualitative aspects of their performance, such as the depth of relationships with followers or their own personal satisfaction (K. Singh, 2021). It is far from certain that quantitative metrics guarantee genuine success and well-being, meaning a positive experience for influencers themselves (WHO, 2023). Despite the exponential rise of influencers, there is still limited understanding of how these motivational forces affect their well-being (Berryman & Kavka, 2018). Research suggests that while a large follower count may signal external success, it is rather authenticity and high-quality relationships with the audience that hold the greatest significance for a sustainable career (Han & Balabanis, 2024).

2.2.4 A Human-Centric Perspective

Given the foundational approach of this dissertation, users are regarded as economic actors, yet it is not self-evident that value creation in this user-driven economy should be shaped by corporate objectives. For instance, individuals’ value creation is likely not driven by innovation and growth, as it is in business contexts. This calls for a human-centric perspective that captures individuals’ interests and motivations. Hence, in this dissertation, a human-centric perspective refers to motivations and actions that contribute to an individual’s intrinsic core values, such as the preservation of integrity, autonomy, and increased well-being, see Figure 3.

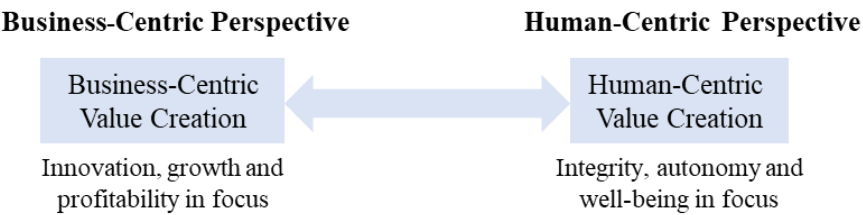


Figure 3. An illustration of human-centric and business-centric perspectives in this dissertation, contrasting their respective objectives.

Finally, a human-centric perspective shares similarities with user experience and user design, both of which aim to create more user-friendly interfaces and products. While companies leverage this knowledge to optimize engagement and interactions, Shin (2013) highlights that such efforts are often driven by commercial interests, where user participation and trust are strategically managed to enhance business outcomes rather than to directly strengthen individual values. An example of this is the implementation of infinite scrolling. While it eliminates the need for users to click through pages, making navigation smoother, it also increases the likelihood of users spending more time than intended on a platform, affecting how they prioritize and manage their time (Montag et al., 2019).

2.2.5 Determining Human-Centric Values

Research has shown that external rewards for performance, such as financial compensation or social recognition, can sometimes undermine intrinsic motivation. When the focus shifts to external rewards, individuals risk losing interest in the activity itself (Deci, 1971; Koestner et al., 2008). This can lead to reduced engagement and creativity, as external goals overtake the genuine enjoyment of performing a task. Kasser (2002) and Hari (2019) highlight the consequences of promoting materialistic values, such as the pursuit of luxury goods and status, from an early age. Hari (2019) describes these values as “empty” or “junk values,” as they drive individuals to prioritize fame and material success at the expense of more genuine values, such as compassion and personal growth.

According to Beers Fägersten (2017) and Marwick (2015), social media platforms, such as Instagram, can reinforce these effects through constant social comparison. Users often compare their lives to the glamorous lifestyles of influencers, which can lead to feelings of envy and dissatisfaction. There are also negative aspects linked to freedom and well-being. Schwartz (2000) suggests that freedom can be overrated and at times experienced as a form of tyranny. He argues that when individuals are faced with too many choices, such as selecting from multiple pairs of jeans, they may lack the time to try them all, which can result in dissatisfaction, as the best option might still be among those left untested.

Empirical studies on well-being have provided clear insights into the factors that contribute to greater well-being and life satisfaction. Research suggests that fame, hard work, or wealth are often not the primary factors that lead to a meaningful and fulfilling life. Waldinger and Schulz (2023) emphasize that strong and meaningful relationships have a positive effect on cognitive functions over time, while also contributing to greater happiness and improved health. Their research also highlights the harmful effects of loneliness, showing that social isolation can have a direct negative impact on both mental and physical health. Another perspective on values in life is presented by Ware (2019), an Australian nurse who worked with patients in their final weeks of life. Through her experiences, she identified the five most common regrets people express on their deathbeds:

Chapter 2

- ❖ Not having lived life on one's own terms.
- ❖ Allowing others to control one's decisions.
- ❖ Not spending enough time with loved ones.
- ❖ Not having the courage to express one's feelings.
- ❖ Losing touch with old friends.

These perspectives underscore the complex interplay between external incentives, personal fulfillment, and well-being. While material success and social validation are often portrayed as desirable, research suggests that they do not necessarily lead to long-term satisfaction. Instead, factors such as autonomy, meaningful relationships, and intrinsic motivation play a more significant role in shaping a fulfilling life. Given this background, and considering this study's focus on actions, rewards, and non-monetary costs, Self-Determination Theory provides a relevant framework for further analysis (Deci & Ryan, 1985, 2000). Unlike Maslow's (1959) theory, which primarily categorizes needs, or Herzberg's (1966) focus on job satisfaction, Self-Determination Theory offers a more fluid perspective on how individuals engage in activities based on their internal and external motivations. This makes the theory particularly relevant for analyzing user behavior and human-centric value creation within the context of the user-driven data economy.

Self-Determination Theory identifies three fundamental psychological needs: autonomy, competence, and relatedness (Deci & Ryan, 1985). *Autonomy* refers to an individual's ability to make independent choices and maintain control over its life. *Competence* relates to the sense of mastery in areas important to the individual. *Relatedness* is tied to forming positive and meaningful connections with others. The theory highlights that when these needs are met, individuals tend to engage in more meaningful activities, which in turn positively affects their mental and physical well-being (Deci & Ryan, 1985, 2000). Furthermore, the theory distinguishes between various types of motivation, including *non-self-determined* and *self-determined motivation*, see Table 1.

These can further be divided into amotivation, extrinsic motivation, and intrinsic motivation. Extrinsic motivation exists on a continuum, ranging from controlled to more autonomous forms. Intrinsic motivation is inherently autonomous (Cerasoli et al., 2014; Deci & Ryan, 2000). These forms of motivation are central to understanding how individuals are most effectively motivated in different contexts and will now be explained in more detail.

Table 1. Simplified overview of nonself-determined and self-determined motivation. Adapted from Gagné and Deci (2005).

<i>Nonself-Determined</i>		<i>Self-Determined</i>	
Amotivation	Extrinsic Motivation		Intrinsic Motivation
Lack of Motivation	Controlled Motivation	Autonomous Motivation (Internalized)	Autonomous Motivation (Inherent)

Amotivation describes a state where the individual lacks the desire to act, for example, when interest, enthusiasm, or the will to engage in an activity is absent (Gagné & Deci, 2005; Ryan & Deci, 2000). This can occur when the person sees no reason to participate or feels that they lack the ability to influence the outcome of their actions.

Extrinsic motivation, on the one hand, can take both controlled and autonomous forms, depending on the degree of internalization. Extrinsically controlled motivation arises when actions are driven by external factors, such as receiving a reward or avoiding punishment (Cerasoli et al., 2014; Ryan & Deci, 2000). This type of motivation is often associated with short-term compliance but can undermine long-term satisfaction and well-being (Ryan & Deci, 2000).

However, extrinsic motivation is not necessarily negative or entirely externally driven. Over time, it can become internalized, evolving into internalized autonomous motivation. In this process, individuals integrate the value of an activity into their sense of self, making the behavior more self-determined. For example, someone may start exercising to lose weight for an event (a controlled extrinsic motivation) but later continue because they appreciate the health benefits and identify with an active lifestyle (a more autonomous form of extrinsic motivation) (Deci & Ryan, 2000).

Intrinsic motivation, on the other hand, involves engaging in an activity for its inherent enjoyment or personal satisfaction (Ryan & Deci, 2000). This type of motivation is strongly linked to autonomy, as individuals act out of genuine interest and internal drive. For instance, a person may create content purely for the joy of the creative process. Research has shown that intrinsic motivation fosters deeper engagement, enhances creativity, and contributes to greater long-term well-being (Deci & Ryan, 2000). Autonomous motivation, which includes both intrinsic motivation and well-internalized extrinsic motivation, refers to engaging in activities with a sense of choice and personal commitment. It is driven by values, interests, and personal meaning, rather than external pressures. Autonomous motivation is associated with higher levels of creativity, sustained engagement, and effective problem-solving (Gagné & Deci, 2005; Ryan & Deci, 2000). For example, a content creator might produce videos due to a passion for storytelling or a sense of personal fulfillment.

2.3 Toward a Model of Analysis

Self-Determination Theory constitute the base for analyzing the balance between human-centric and business-centric value creation in social media. It builds on the three types of motivation, as outlined in Table 1.

- ❖ *Intrinsic and Autonomous Motivation*: Operationalized as State 1, where actions are driven by internal factors such as curiosity, enjoyment, and personal growth. For example, a user creates and shares content on social media because they genuinely enjoy it and find it meaningful. The individual appreciates the creative process, feels personal fulfillment, and shares content without expecting rewards in the form of likes or financial compensation.
- ❖ *Extrinsic and Autonomous Motivation*: Operationalized as State 2, where actions are externally motivated by factors such as status, fame, and wealth but are still carried out autonomously and align with the individual's values. These motivations can be internalized and become part of a person's own core values. For example, a content creator publishes posts knowing that it benefits their personal brand or future opportunities, such as building a professional profile or attracting collaborations. While the person is driven by an external goal, they still feel a sense of self-determination and recognize personal value in the activity.

- ❖ *Extrinsic and Controlled Motivation:* Operationalized as State 3, where actions are shaped by external pressures, such as carrot-and-stick strategies, platform algorithms, and sponsorship demands, leading to a low degree of autonomy. For example, an influencer feels obligated to create and publish content because their followers and sponsors expect it. They experience pressure from algorithms, the need for regular activity, and fear of losing engagement if they do not keep up. Their activity is primarily driven by external rewards and the avoidance of negative consequences, rather than genuine interest.

The model integrates the research questions, Self-Determination Theory, a human-centric approach to value creation, and social media users' role in the user-driven data economy, as illustrated in Figure 4. This model will be applied in the analysis to address the research questions and fulfill the dissertation's overall aim.

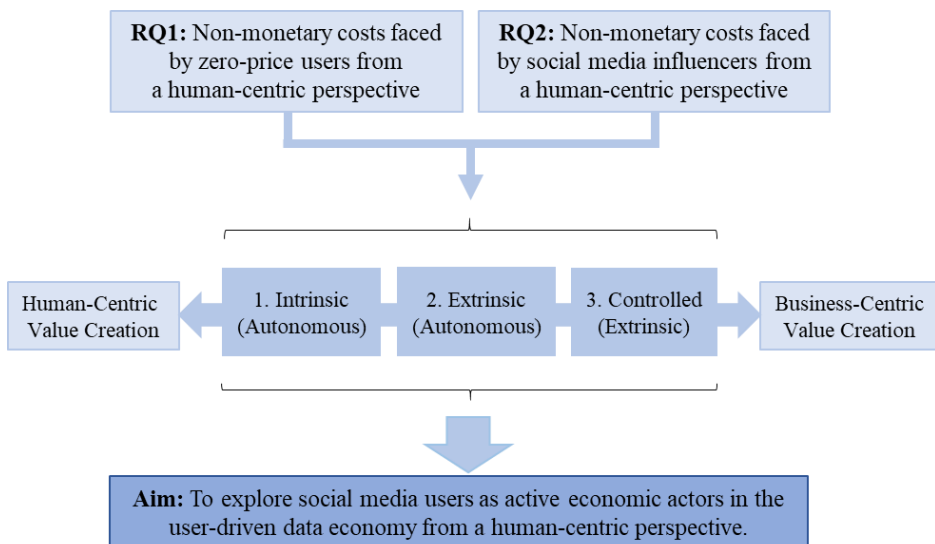


Figure 4. An illustration of the dissertation’s model of analysis which interconnects the research questions, theoretical framework and research aim.

3

Research Methodology

*“We cannot solve our problems with the same thinking
we used when we created them.” – Albert Einstein⁹*

This chapter presents the research methodology, beginning with the study’s starting point and motivations in Section 3.1. Section 3.2 outlines the research design, incorporating a phenomenon-based approach, abductive methodology, and mixed methods. The process of refining research questions through literature reviews is discussed in Section 3.3. Methods for data collection and analysis are described in Sections 3.4 and 3.5, followed by an overview of the paper writing process and author contributions in Section 3.6. The analytical framework and triangulation strategy are introduced in Section 3.7, while Section 3.8 concludes with a discussion on scientific rigor, covering validity, reliability, reflexivity, ethical considerations, and research tools.

⁹ Einstein, A. (attributed). While widely attributed to Albert Einstein, no verifiable source or primary reference seems to confirm that he ever said or wrote these words.

3.1 Starting Point

My interest in doctoral studies dates back to 2007, when I started an industrial doctoral position at a startup company focusing on vehicle positioning based on GSM and GPS technology. However, the economic financial crisis that occurred in 2008 prevented me from continuing my studies. As a person, I am very curious, and my interest in making a new attempt was sparked when I faced the choice of buying either one or two chocolate balls for my child without being able to determine if the offer was really a good deal. I will describe this special occasion in short.

It was the year 2016, and I walked into a bakery with my child. He had been promised a chocolate oatmeal ball. When it was my turn to pay the SEK 12¹⁰ that the chocolate ball cost, the cashier said: – You can buy two chocolate balls for SEK 20. It sounded like a pretty good offer, but I smiled and politely responded that one chocolate ball would be enough for my child. However, the cashier was persistent and said “Why don’t you want to buy two? You’ll save 4 kronor!” I felt a bit confused, but I politely declined again. I finally paid, and we left the store with one chocolate ball. But as we walked away, I could not stop thinking about the cashier’s comment. Was I really saving 4 kronor, or was I losing 8? If I bought one chocolate ball for SEK 12, I would still have SEK 8 left, but if I bought two, I would be walking out with SEK 20 less, right? I was not quite sure how to think about this “saving,” and the evaluation of the second chocolate ball, and suddenly it all seemed more complicated than it should have been.

That simple incident at the bakery sparked a thought in me about all the “hidden” costs (i.e., other than economic costs) we encounter in everyday life. It made me start thinking about a similar situation in the digital world, especially on social media. Are *users like you and me* really making a good deal when we use “free” apps? That little incident at the bakery, seemingly insignificant, eventually became the starting point for my exploration of social media users and their non-monetary costs.

¹⁰ Swedish Krona

With my diverse background, together with my intrinsic motivation, I felt compelled to contribute to clearing things out. Fortunately, I was lucky to work with great people who made this journey possible and supported me along the way. An important step in my development was my licentiate thesis, which not only marked a milestone for me, but also contributed to my personal growth. Working on the thesis taught me to expand my thoughts and perspectives, leading to a deeper personal development and detachment.

However, and according to Berger and Luckmann (1966), social sciences are not entirely objective or neutral and I am thus fully aware that my background may have introduced potential biases in my data interpretation. Therefore, I have been committed to conduct my research with an open mindset, actively seeking, discussing, and considering various perspectives to achieve a balanced and profound understanding of the user-driven data economy and its impact on users' well-being and human sustainability.

3.2 Research Design

I began my research with literature studies, which shaped the initial aim and research questions for my licentiate thesis. Through a conceptual study, I further developed this work in a qualitative analysis, which resulted in, among other things, Paper I. Both Paper I and the licentiate thesis laid the foundation for new literature searches, leading to an updated aim and research questions in the continuation of the dissertation.

The research process has been characterized by a phenomenon-based approach in accordance with von Krogh et al. (2012). Instead of starting with predefined theoretical frameworks, a phenomenon-based approach is particularly useful for studying rapidly evolving and complex phenomena, which makes it relevant for understanding the user-driven data economy. Furthermore, and according to Edmondson and Mcmanus (2007), this approach is particularly useful in exploratory research, as it helps to capture insights and nuances that may not yet be fully addressed by existing theories.

The research process has followed an iterative trajectory, structured around five papers with different research designs, as summarized in Table 2. Paper I and Paper V are conceptual studies, where Paper V aims to synthesize previous research findings and provide a broader understanding of the user-driven data economy. Paper II and Paper IV are based on cross-sectional studies, employing quantitative methods to analyze the human-centric perspective of zero-price users. Paper II examined “free” services, while Paper IV focused specifically on Facebook, and the data collection for these two papers were conducted in parallel. Finally, I also conducted a case study on influencers, which resulted in Paper III.

Table 2. The papers, aim, and research design.

Paper	RQ	Aim	Research Design
PI	–	Characterize a taxonomy of e-commerce	Conceptual
PII	1	Explore non-monetary costs of zero-price users	Cross-sectional study
PIII	2	Explore non-monetary costs of influencers	Case study
PIV	1	Explore non-monetary costs on Facebook	Cross-sectional study
PV	(1&2)	Characterize the user-driven data economy	Conceptual

A key methodological aspect of this dissertation has been the combination of qualitative and quantitative methods. The qualitative studies primarily consisted of interviews with content creators, focusing on the emotional, social, and economic aspects of their work. These interviews provided insights into how their intrinsic and extrinsic motivations were influenced by external factors, such as algorithmic demands and sponsorships. This enabled a deeper understanding of how well-being and working conditions are shaped and affected by these factors.

The dissertation has been guided by an abductive approach, where inductive and deductive logic have interacted (Dubois & Gadde, 2002). This method allowed for a continuous process of testing and refining both theories and empirical findings.

For example, the literature reviews formed the basis for developing survey questions that better captured relevant aspects, and the survey results, in turn, led to a more in-depth understanding (Saunders et al., 2009).

The process continued by another iterative phase, moving from theoretical insights to the analysis of new empirical data. This resulted in Paper V, a conceptual study that functioned as a synthesis of the previous studies, where findings were compiled and linked to broader theoretical perspectives. The conceptual research design enabled a deeper understanding of the user-driven data economy by integrating insights from both empirical data and previous research (Boell & Cecez-Kecmanovic, 2014).

The choice to work iteratively has had significant implications for the quality of the study. It has provided a more in-depth understanding of how different aspects of the user-driven data economy interact. At the same time, basing the study primarily on self-reported data comes with certain limitations. Self-reported data relies on individual perceptions, which may affect the generalizability of the results. A potential future development could therefore involve triangulation with other data sources, such as observational studies or analyses of digital behavior, to further strengthen the validity of the findings.

Additionally, the dissertation has been shaped by an interdisciplinary approach (Markus, 2008), integrating insights from various academic fields to develop a more nuanced understanding of social media users and the user-driven data economy. This perspective highlights both economic and social dimensions of the phenomenon, contributing to a broader analysis of the complex interplay that drives the user-driven data economy. The process, consisting of the initiation and adjustment phase, data collection phase, data analysis phase, and paper writing phase, is illustrated in Figure 5 and will now be further explained in more detail.

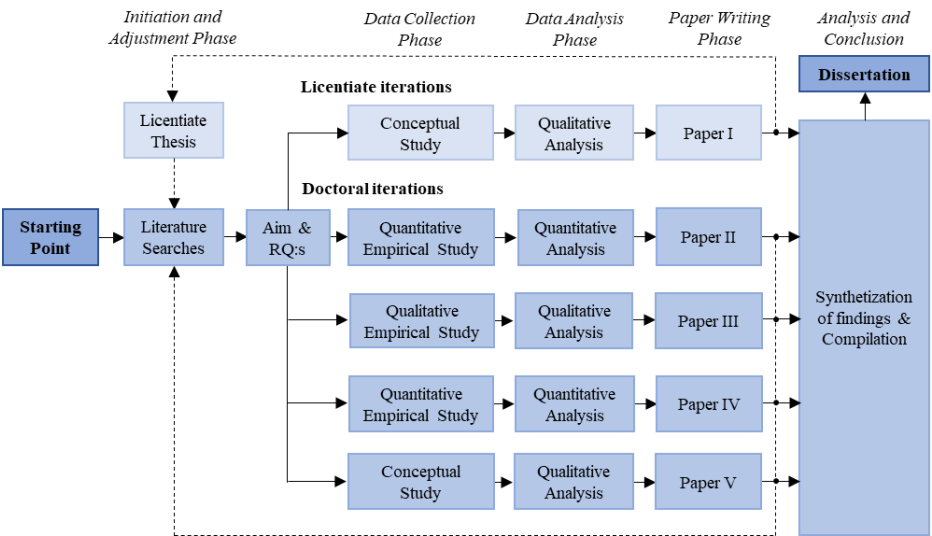


Figure 5. An overview of the dissertation’s research design and research process.

3.3 Initiation and Adjustment Phase

At the start of my research, I established a foundation through an extensive literature study to grasp the user-driven data economy. This study aimed to obtain an initial overview of existing fields of research. By identifying, evaluating, and integrating relevant research, the objective was to discover research gaps and to serve as support for formulating precise research questions. The literature search began in the autumn of 2017 and continued throughout the doctoral studies and culminated in a review of over 1000 research articles. The search was primarily conducted through Scopus, Web of Science, and Google Scholar, which were chosen for their coverage of scientific journals. The central keywords used to guide the search for relevant research articles are presented in Table 3, reflecting the definitions and theoretical framework applied in this dissertation and their connection to the research papers. The key concepts for the empirical studies, Paper II, Paper III and Paper IV, are further operationalized according to Table 3.

Table 3. Key concepts and their relationship to the research papers where the mid section connects to RQ1 and zero-price users and the bottom part connects to RQ2 and content creators.

Paper I	Paper II	Paper III	Paper IV	Paper V
Web 1.0				
Web 2.0				User-driven
Digital platforms				
User-generated content				
Social media				
B2C-relationship				
C2C-relationship				U2U-relationship
C2B-relationship				U2B-relationship
Human-centered data economy				Human-centric data economy
Personal data	Personal data Zero-price markets Time Attention Privacy Advertising Consequences		Personal data Zero-price markets Time Attention	Zero-price markets
Content creators		Well-being Working conditions		Creator economy

Abbreviations in the table: Business (B), Consumer (C), and User (U).

This dissertation operationalizes key empirical concepts, highlighted in bold in the table above, to explore aspects of the digital economy and users’ roles in zero-price markets. Through surveys with zero-price users and interviews with influencers, the study examines personal data, zero-price markets, time, attention, privacy, advertising, consequences, and the role of influencers in the digital economy. Below is a description of how these concepts have been operationalized within the scope of this dissertation:

- ❖ *Personal data* is defined as “any information relating to an identified or identifiable natural person” (European Commission, 2016: p. 33). This includes data collected by digital platforms, including sensor-based data (GPS, microphone, camera) and behavioral data. The study examines users’ awareness of data collection and potential risks.

- ❖ *Zero-price markets* are seen as markets where consumers can access goods or services without a direct monetary payment, typically in exchange for data, attention, or engagement that generates revenue through alternative means, such as advertising or data monetization (Newman, 2015). The analysis explores users' understanding that "free" services are not truly free, as well as their perceived benefits and non-monetary costs.
- ❖ *Time* in this dissertation relates to the time users invest in digital platforms in relation to work, studies, and leisure, focusing on perceived time costs and how platforms shape daily routines.
- ❖ *Attention* in this dissertation is related to how users' cognitive resources are exploited through algorithms and targeted advertising, examining the impact of platform design on concentration, fatigue, and cognitive overload.
- ❖ *Privacy* in this dissertation refers to users' sense of control and security over their personal information, including an analysis of data handling, perceived risks, and protective measures (see e.g. Solove, 2008).
- ❖ *Advertising* in this dissertation refers to commercial messages targeted at users via social media, assessing attitudes toward personalized advertising and its influence on digital interactions (see e.g. Lam et al., 2023).
- ❖ *Consequences* highlight social, economic, and psychological effects of participating in the user-driven data economy, including impacts on well-being, work-life balance, personal life, and creativity.
- ❖ *Well-being* in this dissertation is seen as positive and negative aspects that affect well-being.
- ❖ Finally, *working conditions* are examined in terms of private and professional investments, financial stability, and external control.

3.4 Data Collection Phase

In conducting the research, I utilized four methods for data collection: literature reviews, interviews, a questionnaire, and secondary data collection. In these data collection methods, I have also considered potential biases that could affect the representativeness of the data, which is explained for each respective method.

For all my scientific papers, I conducted more specific *literature reviews*. These reviews were mainly carried out between 2018 and 2022. A selective approach inspired by Boell and Cecez-Kecmanovic (2014) helped focus the review on the most relevant research articles according to a methodical three-step process: first, examining the most cited or relevant articles based on titles and abstracts; second, investigating the oldest documents to trace the origins and development of key concepts; and finally, considering the most recent publications to capture the latest developments and emerging terms. This described approach ensured a thorough understanding of historical and contemporary perspectives within my scope of research.

In the second part of my PhD process *interviews* were conducted offering a qualitative perspective as described in Paper III. The research primarily focused on YouTube, a platform known for its clear metrics such as views and likes, and its direct payments to creators, thus enhancing comparability with other studies. Specifically, the study targeted Swedish influencers ranging from nano to macro-influencers. Notably, no mega influencers were among of the participants.

A key challenge in qualitative research, particularly in interviews, is self-selection bias (Bryman, 2016). In this study, efforts were made to mitigate this by reaching out to a broad range of Swedish YouTube influencers, from nano to macro-influencers. Despite these efforts, it was difficult to reach mega and celebrity influencers, as they appeared to be very busy. In total, 160 influencers were identified and contacted, with 13 agreeing to participate. The final sample included a diverse range of ages, subscriber counts, and content types, from entertainment to lifestyle, ensuring a broad representation of experiences.

The interviews were conducted as semi-structured video conferences, each lasting approximately 1–2 hours. According to Bryman (2016), semi-structured interviews balance structure and flexibility, making them well-suited for exploring complex phenomena while allowing for natural conversations that lead to richer and more genuine responses. To maintain accuracy, all interviews were recorded, transcribed, and carefully translated into English while minimizing transcription errors. In addition to the qualitative data from interviews, secondary quantitative data were collected from the respondents' YouTube channels, including subscriber numbers and channel launch dates, further enriching the dataset. To further ensure the representativeness of the sample, secondary data from the influencers' YouTube channels, such as follower counts and engagement metrics, were also used. This added a quantitative dimension that complemented the qualitative interviews. This method triangulation helped cross-verify the insights gathered from different data sources, reducing the risk of bias from relying solely on a single data source (Denzin, 1970).

Furthermore, a *questionnaire* with 196 responses from zero-price users was conducted to explore their perceptions of non-monetary costs associated with these services. The survey, applied in Paper II and Paper IV, followed the framework of De Vaus (2001) and combined single-choice and open-ended questions to capture a broad range of user attitudes towards non-monetary costs. To reach a diverse audience and minimize bias, the questionnaire was available online and promoted at Linköping University and Linköping Science Park. While this strategy helped balance academic and industrial perspectives, geographic and educational biases remained, as responses were limited to a university and a tech-focused environment in a larger city. The combination of open-ended and single-choice questions enriched the data by capturing diverse user perspectives (Bryman, 2016). To reduce bias, strategies were applied to address optimism and affect bias (Slovic et al., 2007), including clear instructions to encourage honest responses and measures to prevent misunderstandings Yin (2014). Confidence intervals, following Newbold et al., (2013), were calculated to enhance statistical accuracy and provide a clearer view of response variation.

3.5 Data Analysis Phase

Regarding the analysis, Gioia methodology (Gioia et al., 2013) was utilized in Paper III, as it is well suited for systematically categorizing textual data to identify specific themes and patterns. In addition to this, content analysis was applied in Paper I to systematically code and categorize large amounts of text. Miles and Huberman (1994) describe content analysis as an approach that enables the identification of consistent patterns and themes, which I used to refine predefined categories and develop a deeper analysis. Paper V, on the other hand, employed thematic analysis, which involves identifying, analyzing, and reporting themes in a more flexible and interpretative manner, not bound by prior categorizations. According to Braun and Clarke (2019), thematic analysis is a method for recognizing and interpreting patterns within qualitative data, emphasizing its flexibility and the depth of understanding it can bring to research findings. In my case this implied that the themes often emerge from the data itself. Descriptive statistical analysis, as detailed by Yin (2014) and De Vaus (2001), was employed in Papers II and IV. This method facilitated the examination and comparison of case studies concerning influencers and platforms, highlighting patterns and variances that affect both influencers and users in the user-driven data economy. Descriptive statistics are used to summarize and describe the features of a dataset, providing simple summaries about the sample and the measures. Applied within a cross-sectional study design, it enabled the gathering of data from a broad participant base, offering a snapshot of the current situation at a specific moment. A summary of the data collection and analysis methods in relation to the papers is presented in Table 4.

Table 4. Research nature, data collection, and data analysis methods.

Paper	Methodology	Data Collection Type	Data Analysis
I	Qualitative	Literature review	Content analysis
II	Quantitative	Questionnaire with single-choice and open-ended questions	Descriptive statistics
III	Qualitative	Semi-structured interviews including interval questions and quantitative secondary data	Gioia methodology
IV	Quantitative	Questionnaire with single-choice questions & secondary database source	Descriptive statistics
V	Qualitative	Literature review	Thematic analysis

3.6 Paper Writing Phase and Own Contributions

I have quantified and described my contributions compared to my co-authors in the appended papers, which is illustrated in Table 5. This provides a detailed overview of the research nature, data collection, and data analysis methods employed in each paper, highlighting my primary role in each stage of the research process.

Table 5. Papers and their publication status.

Paper	Title	Authors	Publication status
I	Towards a taxonomy of E-commerce: characterizing content creator-based business models	Mileros, M. D., Lakemond, N., & Forchheimer, R.	Technology Innovation Management Review, 9(10), 62-77, 2019.
II	Free for you and me? Exploring the value users gain from their seemingly free apps	Mileros, M.D. & Forchheimer, R.	Digital Policy, Regulation and Governance, 27(2), 239–257, 2024.
III	The health paradoxes of social media influencers	Mileros, M.D., Norrman, C., & Öberg, C.	Journal of Innovation and Entrepreneurship, 14(12), 2025.
IV	The other side of the coin: exploring non-monetary costs faced by users in zero-price markets	Mileros, M.D.	Working paper. An earlier version was published in the Proceedings of the International Continuous Innovation Network Conference (pp. 288–297), Odense, Denmark, 2019.
V	Toward an economy driven by user resources: exploring contexts, actors, and relationships	Mileros, M.D.	Working paper. An earlier version was published in the Proceedings of the International Continuous Innovation Network Conference (pp. 384–392), Hamburg, Germany, 2024.

Paper I – Towards a taxonomy of E-commerce: characterizing content creator-based business models

In this paper, I developed the main idea, design, and conducted the literature review. I also wrote the first draft of the paper and further worked with my supervisors Nicolette Lakemond and Robert Forchheimer in an iterative approach to improve the content and quality of the work. I further presented the paper at the International Society for Professional Innovation Management (ISPIM) conference in Florence, Italy, in June 2019 and managed the review process with the journal's editorial team.

Paper II – Free for you and me? Exploring the value users gain from their seemingly free apps

In this paper I was the driving force throughout the process, where I developed the main idea, designed the study, created the survey questions, collected the data, and wrote the initial draft of the manuscript. The data analysis and refinement of the paper was further iterated together with my supervisor Robert Forchheimer and published in the journal *Digital Policy and Research Government* in 2024.

Paper III – The health paradox of social media influencers

In this paper, the idea and initiative were entirely mine. I developed the interview questions and carried out all the interviews. I conducted the initial literature search, developed the interview questions, identified and interviewed the participants, and drafted the initial paper. I also presented the paper at the 2023 R&D Management Conference in Trento, Italy. Together with my supervisor Charlotte Norrman and Christina Öberg we refined the paper for journal publication.

Paper IV – The other side of the coin: exploring non-monetary costs faced by users in zero-price markets

In this paper I conceptualized the main idea, drafted the initial version of the paper, and carried out the data collection and data analysis. I also attended the MyData Conference in Helsinki, Finland, in September 2018 to learn more about how personal data can be managed in a human-centric way.

In September 2019 I presented the paper in collaboration with my supervisor Nicolett Lakemond at the International Continuous Innovation Network Conference in Odense, Denmark. Currently I have developed a new foundation of the paper based on my empirical data collection.

Paper V – Toward an economy driven by user resources: exploring contexts, actors, and relationships

This paper, which I have entirely designed, initiated, and completed on my own, provides an understanding of the user-driven data economy. From the original idea to the research strategy, data collection, analysis, and writing, every aspect of the work reflects my individual effort. I also presented this paper at the CINet Conference in Hamburg, Germany, in 2024.

3.7 Framework for Analysis

The chosen research strategy was designed to address the research questions and achieve the objectives of the dissertation through methodological triangulation. According to Denzin (1970), triangulation can involve methodological triangulation, diverse data sources, and perspectives, all of which contribute to the credibility and analytical depth of research findings. Saunders et al. (2009) further argue that triangulation provides a stronger foundation for data analysis. By applying this strategy, I was able to present an integrated and nuanced perspective on the user-driven data economy, which established the basis for the initial data analysis. A central part of the triangulation process was the structured data analysis, where content analysis was combined with an approach inspired by the Gioia methodology (Gioia et al., 2013). In accordance with the analytical model, data from the papers were broken down and summarized into first- and second-order themes.

The analysis for Research Question RQ1, based on Paper II and Paper IV, is presented in Table 6 and Table 7, respectively, while the analysis for RQ2, based on Paper III, is presented in Table 8.

Table 6. 1st and 2nd order analysis of Paper II.

Intrinsic/Autonomous	Extrinsic/Autonomous	Extrinsic/Controlled
<i>First order themes</i>		
Users perceive that “free” services provide significant value due to their simplicity and flexibility, such as the ability to test and switch between services without financial commitments.	Users appreciate the convenience of “free” services, their design and vast offerings, willingly accepting costs in the form of data transfers or personalized advertising.	Platforms seem to be designed to optimize their own objectives rather than enhance user autonomy.
Users do not believe they have full control over their choices, yet they are influenced by platform design and structures, leading to non-monetary costs.	For some, watching advertisements is an acceptable trade-off for “free” access to services, while others see it as a disruption that affects their decision-making and consumption patterns.	“Free” services come with non-monetary costs, such as procrastination, reduced concentration, increased distraction, and altered sleep patterns.
	Perceptions of “free” services vary across generations, with younger users being more accepting of non-monetary costs, viewing them as a natural part of their digital experience.	Commercialization thrives on extensive user knowledge, allowing platforms to convert attention and privacy into commodities.
	Platform design steers time and attention away from self-determined goals and values, potentially undermining users’ core values without them reflecting on the actual cost.	
<i>Second order themes</i>		
❖ Perceived significant value of “free” services.	❖ Adaptation to external factors.	❖ Platform design and control.
❖ Perceived loss of autonomy.	❖ Diverging attitudes toward advertising.	❖ Non-monetary costs.
	❖ Generational differences.	❖ Platforms’ deep understanding of users.
	❖ Subtle shift away from intrinsic core values.	

Table 7. 1st and 2nd order analysis of Paper IV.

Intrinsic/Autonomous	Extrinsic/Autonomous	Extrinsic/Controlled
<i>First order themes</i>		
Some users make conscious choices to protect their privacy, but many have limited knowledge of how design patterns, personalized advertising, and personal data are utilized.	Many users express concerns about their control over personal assets, reflecting uncertainty about the actual power they hold.	Users lack insight and knowledge about service providers' tactics and their impact.
Users place a high value on their time, yet often act contrary to this by remaining engaged in services longer than intended.	Users often do not perceive themselves as having a business relationship with service providers, which can result in an underestimation of the non-monetary costs associated with their usage.	Platforms prioritize their own value creation strategies, largely sidelining users' interests.
<i>Second order themes</i>		
❖ Privacy concerns and knowledge gaps.	❖ Perceived concerns over personal assets.	❖ Information asymmetry and loss of control.
❖ High appreciation of personal time, yet frequent disregard for it in practice.	❖ Limited understanding of the business relationship.	❖ Corporate optimization at the expense of user interests.

Table 8. 1st and 2nd order analysis of Paper III.

Intrinsic/Autonomous	Extrinsic/Autonomous	Extrinsic/Controlled
<i>First order themes</i>		
Influencers often begin with autonomous motivation, where their creative work is driven by intrinsic values and a passion for self-expression.	Influencers often experience increasing pressure to tailor their content to retain sponsors, leading to demands for maintaining high engagement levels and a growing follower base.	Some influencers manage to adapt to commercial demands by selecting sponsors that align with their values, allowing them to maintain a balance between autonomy and financial stability.
Income from donations can strengthen influencers' independence by allowing them to create content that aligns with their own values rather than adapting to external demands.	Although influencers may appear successful based on external metrics such as engagement levels and follower count, this success can simultaneously pose risks to their well-being.	Influencer success is subjectively defined and shaped by various factors. It can coexist with elements that simultaneously threaten their well-being, such as performance pressure or audience expectations.
Influencers who continue prioritizing their intrinsic aspirations and creative drive tend to maintain a higher level of enjoyment and well-being. This does not necessarily correlate with follower count but rather with a balance between autonomy and financial stability.		Working conditions need further evaluation to ensure influencers have a more supportive work environment, allowing them to maintain a sustainable balance between creativity and financial interests.
<i>Second order themes</i>		
❖ Creative freedom and intrinsic motivation.	❖ Adaptation to external factors.	❖ Pressure from sponsors, algorithms, and audience expectations.
❖ Connection between donations and autonomy.	❖ Follower count and subjective success.	❖ External success at the expense of well-being.
❖ Well-being and the joy of creation.		❖ Improved working conditions and supportive environments.

Table 9 provides an overview of different user types and the relationships they maintain within the user-driven data economy. Just like in the previous analysis, the table presents both first- and second-order analysis, here based on Paper I and Paper V, with a focus on contexts, actors, and relationships.

Table 9. 1st and 2nd order analysis of Paper I and Paper V.

Contexts	Actors	Relationships
<i>First order themes</i>		
The transition from an information-based to an interaction-driven economy, where users are not only consumers of content but also providers and suppliers.	Content creators and influencers produce content, build relationships, and operate in a gray area between being individuals and entrepreneurs.	The creator economy is characterized by complex social and commercial relationships, particularly for influencers, whose income depends on algorithms, sponsors, and followers.
Co-creation of value with platforms occurs through digital interactions and users' personal resources.	Zero-price users access "free" services by "paying" with non-monetary costs such as their data, attention, or time and effort.	Users take an active role as providers of personal and creative resources.
New contexts emerge, for example, where users do not pay monetarily but contribute through their data and attention, or where content creators monetize their work both within and beyond platforms.	Platforms establish structures for user interaction and drive revenue models based on data extraction, ensuring that value creation remains within their control.	Concepts and definitions are often used interchangeably, leading to ambiguities regarding users' economic roles and the relationship between creators, platforms, and advertisers.
<i>Second order themes</i>		
❖ From information to interaction.	❖ Hybrid entrepreneurs.	❖ Social and commercial complexity for influencers.
❖ Shared digital value creation.	❖ Zero-price users and non-monetary costs.	❖ Users' informational and commercial relationships.
❖ Personal assets as resource capital.	❖ Platforms' control over value creation.	❖ New relationship types, but ambiguity in concept usage.

Furthermore, the triangulation strategy extended beyond multiple data sources by incorporating theory-building, allowing patterns to emerge naturally. These triangulated findings were synthesized in Chapter 5, where results from the sub-studies were integrated to provide a cohesive understanding of the research problem.

According to Gough et al. (2012), synthesis systematically combines insights from separate parts, fostering a unified understanding of the phenomenon. This process, as they argue, enhances analysis by linking insights from different parts, offering a more robust perspective than any single study alone.

To connect overarching themes to the dissertation’s aim, insights from Miles and Huberman (1994) were used to illustrate how qualitative synthesis reveals interactions between different components. Figure 6 illustrates the process of data collection, analysis, triangulation, and synthesis.

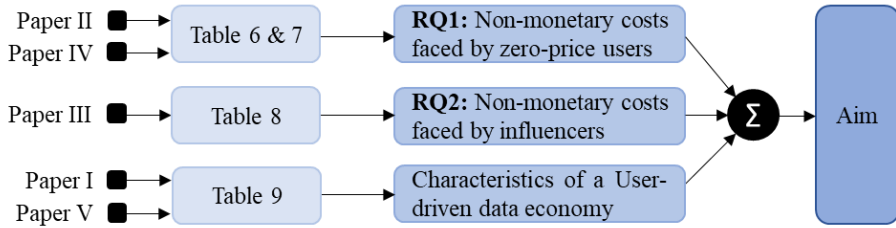


Figure 6. An overview of the data analysis, triangulation process towards the synthesis of the “kappa”.

3.8 Scientific Rigor and Reflections

This dissertation adopts a methodological approach with clearly defined research questions and thoroughly investigated key concepts, to fulfill the criteria of scientific rigor. The aim is to deliver reliable results that meaningfully contribute to the scientific knowledge base. The reliability of the dissertation, based on its solidity and consistency, is founded on criteria from Carmines and Zeller (1979), which underscores the importance of maintaining high reliability in scientific work.

3.8.1 Validity

In this dissertation, validity is seen as “*the best possible approximation of the truth in a given statement or conclusion*” (Cook & Campbell, 1979) but there are several types of validity. These are for instance construct validity, internal validity, and external validity which I will now further relate my research to.

Construct validity refers to whether a study reflects the phenomenon it intends to investigate. To address and strengthen the construct validity in my research, I have implemented two key strategies. The first is the triangulation of data, meaning that information has been collected from multiple sources to ensure an understanding of the studied phenomenon,

in line with Denzin and Lincoln (2008). The second strategy is to carefully document and present a clear and traceable chain of evidence leading from the initial research questions to the final conclusions, as emphasized by Yin (2014). To further enhance the construct validity of my study, I have placed great emphasis on establishing credibility and reliability from the participants' perspectives. This has involved careful work to ensure that the constructs used are valid and relevant within their theoretical and practical contexts.

Internal validity focuses on the extent to which research results and conclusions can be derived from the observations made. In my work, this has been ensured by using multiple analysis methods, including pattern matching (Saunders et al., 2009), data visualization (Miles & Huberman, 1994), and data triangulation (Patton, 1999). To further strengthen the internal validity, I have actively incorporated feedback on the papers and the dissertation. This feedback was gathered through presentations at various academic and professional forums, including internal seminars, doctoral seminars at Linköping University, and events organized by networks and institutes such as the Continuous Innovation Network and Research Institutes of Sweden (RISE). Furthermore, participation in conferences like BLOXPO and MyData has been valuable for deepening the understanding of the blockchain, personal data and their practical challenges.

External validity concerns the extent to which research findings are transferable and applicable to other situations or populations. Yin (2014) emphasizes that while theories derived from case studies cannot be generalized statistically to broader populations, they can still have analytical generalizability to theoretical propositions. This means that insights and conclusions can be applied within the framework of similar theoretical contexts. In my study, the results are considered transferable from social media users to a broader base and individuals. This may be possible due to observed similarities in value perception between the user-driven data economy and other market environments. The concept of transferability is particularly relevant in this context as it allows insights to be applied to different user groups within the broader field of digital economies.

3.8.2 *Reliability*

Reliability in research relates to the ability to repeat or replicate the study (Carmines & Zeller, 1979). This suggests that the outcome is expected to be consistent if the study is conducted by other researchers. To strengthen the reliability of my research, I have applied strategies aimed at standardizing methods and ensuring consistent measurements, which minimizes the risk of variations. Among other things, in my interview studies, I have been keen to schedule these at similar times to maintain uniformity in the respondents' mental state, which is important for reducing variations that can affect data collection. Another step that I have taken to improve reliability is to use multiple measurement methods. Through these methodological choices, I have striven for my research to not only be rigorous and accurate but also to be reliable and trustworthy. Finally, by also standardizing concepts and research procedures, I have aimed to ensure the findings are consistent, replicable, and robust.

3.8.3 *Reflexivity*

Reflexivity has been a central part of my research journey. It has involved a continuous process of staying self-aware and thinking critically about how my background and decisions have shaped my work. Stilgoe et al. (2013) highlight that reflexivity is not just about personal reflection; it is also an institutional practice that pushes researchers to be mindful of their roles, the assumptions they make, and how their work impacts society. This practice thereby fosters a research culture that is both self-critical and socially responsible, which enhances the robustness of the research. Finally, reflexivity has been a constant component in my research, driving me to pursue transparency in the data collection, analysis, and interpretation and for encouraging others to scrutinize and challenge any biases or assumptions that might have influenced my work.

While my research strategy allowed for an understanding of the user-driven data economy, it is important to acknowledge potential limitations. The reliance on case studies and cross-sectional designs may introduce certain biases and limitations due to the specific contexts and timeframes in which data were collected. For instance, and as emphasized by Yin (2014), the case study method may not always be generalizable to wider populations. Similarly, and according to De Vaus (2001), cross-sectional studies provide snapshots in time but cannot establish causality, limiting

insights into long-term trends and effects. An alternative approach could have involved longitudinal studies, tracking the same subjects over an extended period, which could have provided more insights into changes and developments within the user-driven data economy. Additionally, incorporating experimental designs could have allowed for more controlled investigations of specific variables and their impacts, enhancing the ability to infer causality. Despite these potential alternatives, the chosen methods were selected due to constraints in time, resources, and the nature of the research questions. Longitudinal studies and experimental designs require extensive timeframes and resources beyond this dissertation's scope.

3.8.4 Ethical Considerations

Finally, I have followed the ethical standards in my research process according to Wager and Kleinert (2010). This was particularly relevant in conducting the interview studies. For instance, I chose to contact potential participants only via email and limited the follow-up to only one reminder, to respect their time and privacy. This cautious approach reflects an ethical awareness of minimizing discomfort and respecting individual preferences, principles emphasized by utilitarian thinkers such as John Stuart Mill (Dudovskiy, 2016). Obtaining informed consent, both orally and in writing, was a central process that ensured that participants made voluntary and well-informed decisions. This practice not only adheres to the ethical principle of respect for individual autonomy (Dudovskiy, 2016) but also aligns with the framework for responsible research discussed by Stilgoe et al. (2013), which emphasizes the importance of reflexivity and inclusion in research processes. Moreover, all participation was voluntary, and written consents were collected for all interviews, further ensuring ethical compliance. I also placed great emphasis on protecting participants' anonymity, a key aspect of responsible research practice that not only aligns with guidelines from reputable sources such as the Swedish Research Council (2017) but also enhances the quality of the research by ensuring that participants feel secure in expressing themselves freely. This standard of maintaining participant confidentiality is well anchored in research ethics as highlighted by Bell and Bryman (2007). Additionally, participants' right to withdraw their consent at any time and the opportunity to provide feedback on the manuscript were central to my research approach. This openness and inclusion of participants' perspectives reflect an ethical

approach that prioritizes respect for individual rights and the pursuit of maximizing well-being, consistent with the principles of responsible and reflective research practice advocated by Stilgoe et al. (2013). In formulating surveys and interview questions, I was careful to use language that was free from discrimination and offensive expressions, in accordance with ethical guidelines and standards for responsible research (Wager & Kleinert, 2010). Following these ethical principles and standards ensures that my research is not only in line with ethical norms but also contributes to the overall aim of improving well-being and minimizing harm.

3.8.5 Tools and Software

In the research process, I have used tools for data management, text management and reference management to improve quality and efficiency. These tools utilized for text management and reference management are further described below.

Excel is beneficial as a tool to manage and analyze data. This tool made it possible to organize, analyze, and visualize data in a clear and structured way. Since Excel is sensitive to user errors, especially when using complex formulas, there is a risk that small mistakes, such as incorrect cell references or incorrect use of functions, can lead to significant errors in the data analysis. Therefore, great emphasis was placed on verifying formulas and functions to avoid mistakes that could affect the results. Next, AI tools like ChatGPT, Microsoft Co-pilot, Clipto and Google Translate were used for text management, including many back-and-forth translations, review of language and clarity, in compliance with guidelines (European Commission, 2024). These tools have also been used to reduce redundancy of my own texts, and have assisted in search of information about articles or concepts. Furthermore, when it comes to technical terms and expressions, there is a risk of incorrect translations and linguistic distortions. Therefore, all texts have been carefully and manually scrutinized by me and in some cases also checked by a professional language reviewer.

Finally, Mendeley was used for reference management. Reference management tools can help minimize the risk of incorrect citations. Additionally, Mendeley facilitates the management and overview of large amounts of literature, making it possible to conduct a more thorough and

Chapter 3

systematic literature review by also allowing searches on keywords and concepts. However, Mendeley, like other similar tools, can sometimes make errors when specifying references, particularly when dealing with publications by the same author in the same year, or when the reference has been imported or entered incorrectly into the tool. Therefore, the references used were also manually checked.

4

Paper Summaries

“America’s top killer isn’t cancer or heart disease, nor is it smoking or obesity. It’s our inability to make smart choices and overcome our own self-destructive behaviours.” – Dan Ariely¹¹

This chapter summarizes the five papers that form the foundation of this dissertation. Paper I explores business relationships for content creators. Paper II examines the non-monetary costs of zero-price services. Paper III investigates influencers’ well-being and external pressures. Paper IV analyzes non-monetary costs in Facebook’s zero-price model. Paper V conceptualizes the user-driven data economy. The key contributions are also outlined, and the full texts are included in Part II.

¹¹ Worth Books. (2017). *Summary and analysis of Predictably Irrational: The hidden forces that shape our decisions (Based on the book by Dan Ariely)* (p. 30). Open Road Integrated Media.

4.1 Paper I – Content Creator based Business

Research on e-commerce has evolved rapidly, introducing concepts like social commerce, digital platforms, and user-generated content. These developments have, in turn, fostered new business relationships centered around content creators within e-commerce. Despite this rapid development, there is still a lack of an overarching taxonomy that can clearly distinguish between different business concepts and relationships within e-commerce. Therefore, this paper aims to shed light over this issue by conducting and analyzing the new concepts through an extensive literature review. The paper uses an extensive literature review as its foundation, where 250 relevant research articles were carefully analyzed. To develop a taxonomy of different business relationships and concepts within e-commerce, a bottom-up approach was applied, based on the methodology of Baden-Fuller and Morgan (2010). Eight types of business relationships were identified and clarified, see Figure 7.



Figure 7. Illustration of a content creator's business relationships with consumers (C) and businesses (B), where the creator operates either outside the platform's boundaries (a) or within the boundaries of digital platforms (b), as indicated by brackets.

Contributions to the “kappa” – findings from Paper I:

- ❖ The shift from Web 1.0 to Web 2.0 marks a move from information to interaction, where content creators find revenue streams both on and off platforms.
- ❖ Clear user role definitions are needed to reduce confusion and support long-term sustainability for creators.
- ❖ Influencers manage business ties, balancing personal interests with commercial expectations amid varying platform support.

4.2 Paper II – Zero-Price Users and Free Apps

This paper aims to explore the digital economy where companies generate billions of dollars in annual revenue from markets where products and services are offered seemingly without cost. These costs are covered through the collection of personal data in combination with advertising, which is successfully applied by companies such as Google and Meta (Newman, 2015; Pringle, 2016). Although zero-price users (i.e., users utilizing zero-price services) often perceive the products and services as “free,” there has been concern over the use of personal data in these markets and the lack of compensation for users (Laoutaris, 2019). This debate has extended and led to research on privacy issues and the value of personal data in zero-price markets (Malgieri & Custers, 2018; Montes et al., 2019; Newman, 2015, 2018; Pringle, 2016). For example, Meta generated \$117.9 billion in revenue and \$39.4 billion in net income in 2021 from information collected from about 3.6 billion monthly users, corresponding to an average revenue per user of about \$3 per month. Therefore, it is important for zero-price users to carefully weigh the costs and benefits before utilizing zero-price services (Dallas & Morwitz, 2018; Fan et al., 2022). Instead of assessing the value of personal data for zero-price users, the aim of the study was to examine a variety of personally related costs connected to the utilization of zero-price services.

The study was based on a mixed-method research design and a questionnaire to achieve an understanding of users’ perceptions of the non-monetary cost related to zero-price services. The questionnaire involved 196 respondents from Linköping, including both employees and students with a higher education background. It is also important to note that the data collection was limited to four days at Linköping University and Linköping Science Park, which may have affected the selection. The study also addressed validity aspects to increase the robustness of the study. A research process with multiple steps was used to collect data. First, a literature review was conducted through snowball searching of research articles from various sources to gather relevant concepts and definitions related to zero-price services (apps). To facilitate data collection, a simple Google form with survey questions was created, which participants could access through a QR code provided by us. The form was created with click options in radio buttons, except for comments, and some open questions. No personal data was collected or

stored, and the personal integrity of the users was respected. The survey was conducted in December 2021. To analyze the data, descriptive statistics were used also utilizing content analysis for the open-ended questions. Furthermore, in our paper, we explicitly shift the perspective from a business-centric view, where personal data is primarily valued in monetary terms when traded between entities, to a human-centric perspective. We argue that the value of personal data is too complex and impossible to determine from this latter standpoint. Instead, we focus on the benefits users themselves can derive from the exchange of personal data and their exposure to advertising. We found that users of zero-price services can obtain substantial values, approximately 43 euros per month, as shown in Figure 8, and that there are several surrounding benefits, such as the ease of testing and switching zero-price services if they do not meet one's needs.

This study's findings examine the complex costs that users face within zero-price markets, addressing RQ1. It is clear that users appreciate the benefits from "free" services, viewing this relationship as beneficial for both themselves and the companies involved. Yet, the study reveals significant non-monetary costs hidden beneath this perceived mutual advantage, such as procrastination, lack of sleep, and decreased focus. Furthermore, much focus has been placed on evaluating the value of personal data, based on the assumption that users of zero-price services often receive inadequate value for their data. The results confirm that users primarily "pay" for these services with their personal data, leading to concerns about privacy and security, such as identity theft and misuse of personal information (Malgieri & Custers, 2018; Newman, 2015). Additionally, the study reveals that users have significant concerns over various types of personal data and the security risks associated with sharing this data, including identity theft and third-party use of personal data (Gerber et al., 2018; Malgieri & Custers, 2018). The findings underscore the importance of transparency from companies and robust security measures to protect users' digital identities (Acquisti et al., 2013, 2017). Insights also indicate a divided user attitude towards advertising. While some users resist to pay for ad-free experiences, others are willing to pay a small fee to avoid advertising, demonstrating the complex relationship users have with advertising (Elvy, 2017; Newman, 2015).

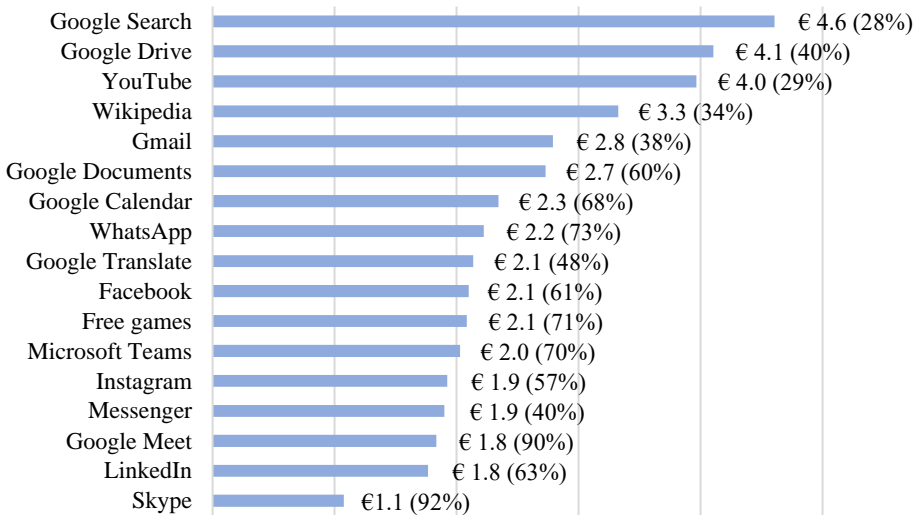


Figure 8. The figure illustrates the willingness to pay per month by zero-price users for different types of zero-price services. Within parentheses, the share of respondents with a willingness to pay a zero amount is indicated.

Contributions to the “kappa” – findings from Paper II:

- ❖ Users can derive substantial value from “free” services, including ease of testing and switching.
- ❖ Non-monetary costs include reduced focus, procrastination, distraction, and less sleep.
- ❖ Users’ attitudes toward advertisements are divided.
- ❖ “Free” services are perceived differently across generations.
- ❖ Platform design influences users’ choices and attention, sometimes undermining autonomy and personal goals.
- ❖ Commercialization of “free” services relies on extensive user data, turning attention and privacy into commodities.

4.3 Paper III – Social Media Influencers and Well-being

This paper explores the perspective of social media influencers, who have become key players in digital marketing through platforms like YouTube, Instagram, and blogs (Campbell & Farrell, 2020; De Veirman et al., 2017; Vrontis et al., 2021). While marketers often measure influencer success by external metrics like follower count (Campbell & Farrell, 2020; Vrontis et al., 2021), this study shifts focus to what success means for the influencers themselves. Many influencers are drawn by the promise of fame, wealth, and influence, but achieving success in this industry requires significant effort and can lead to negative outcomes such as anxiety and financial strain, (Berryman & Kavka, 2018; Jerslev, 2016). Despite the growing number of influencers, there remains a lack of understanding about their challenges (Berryman & Kavka, 2018; Kim & Kim, 2020), as research has primarily focused on their utility to marketers (Campbell & Farrell, 2020; De Veirman et al., 2017; Vrontis et al., 2021). This study seeks to explore the working conditions and investigate positive and negative aspects that affect well-being.

The research employs an exploratory approach, using mixed methods that include in-depth interviews with 12 Swedish social media influencers. The focus is on YouTube due to its established nature and comparability with other studies. The influencers, aged 20 to 50, have between 5,000 and 350,000 subscribers. Data was gathered through semi-structured interviews, supplemented by quantitative data from the influencers' YouTube channels. The analysis, following a qualitative content approach, identifies key themes and uses descriptive statistics to examine the quantitative data. The study indicates that the number of subscribers does not necessarily correlate with influencers' perceived enjoyment or success. While follower count is often used as a success metric, the findings suggest that personal goals, motivations, and life circumstances are important factors in how influencers perceive their success, as illustrated in Figure 9.

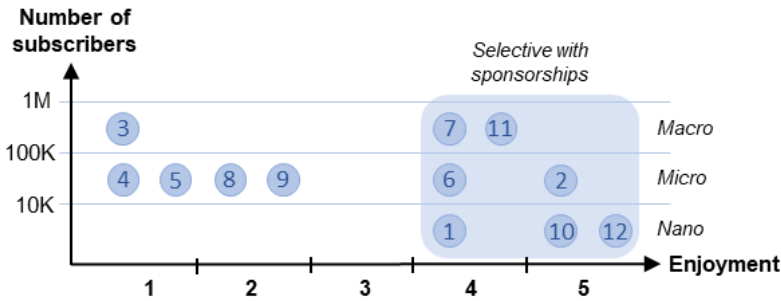


Figure 9. The 12 dots represent the enjoyment levels reported by the 12 respondents. Higher enjoyment was associated with preserved autonomy, whereas lower enjoyment correlated with respondents who indicated experiencing external control by marketers.

Contributions to the “kappa” – findings from Paper III:

- ❖ Improving working conditions for influencers is important to ensure a supportive and sustainable work environment.
- ❖ The number of subscribers does not necessarily correlate with influencers’ perceived success or well-being.
- ❖ Donations strengthen influencers’ independence by enabling content creation aligned with their core values.
- ❖ External pressures, such as sponsorship demands, create pressure to maintain high engagement and follower counts.
- ❖ Influencers’ success is shaped by factors that can simultaneously threaten their well-being, such as performance pressure and audience expectations.
- ❖ Many influencers start with intrinsic motivation, driven by creativity and self-expression.
- ❖ Some influencers manage to maintain a balance between autonomy and commercial success by carefully selecting sponsors that align with their values.

4.4 Paper IV – Zero-Price Users and Facebook

In the evolving digital economy, zero-price markets, where services are offered seemingly without cost, have become increasingly common. These markets often rely on the exchange of personal data for access to services, raising concerns about the nature of the value exchange in these transactions (Malgieri & Custers, 2018; Newman, 2015; Spiekermann & Korunovska, 2017). The aim of this paper is to shed light on the non-monetary costs associated with these exchanges, where services that appear “free” are compensated in non-monetary ways.

The study utilized a cross-sectional research design based on a survey and secondary data. Data collection involved 185 respondents from Linköping, including both employees and students with a higher education background. The methodology included a literature review, creation of a Google form survey accessible via QR code, and data analysis using descriptive statistics and content analysis to explore the non-monetary costs to zero-price users. The importance of various types of data for users is visualized in Table 10.

The conclusion from the study was that users do not see themselves as having a business relationship with service providers and have limited insight into the service providers’ operations. At the same time, there is a widespread concern about control over personal assets. Time (leisure time) is perceived as increasingly expensive over the past five years. While the study highlights a significant distrust toward Meta, it also indicates that awareness of non-monetary costs in zero-price markets remains low.

Table 10. The columns show participants value to keep the following information private, i.e., to prevent unauthorized companies from accessing it.

	Much	Very much	Much or very much	CI*
Access to camera, microphone, GPS, and Wi-Fi	26%	58%	84%	79% - 89%
Documents, text messages, photos, and videos	35%	46%	81%	75% - 87%
To read confidential information in your calendar	26%	46%	72%	65% - 79%
Genetic and biological information	23%	47%	70%	63% - 77%
Health condition	22%	36%	58%	51% - 65%
Behavior, browsing and search habits	31%	19%	50%	43% - 57%
Relationship details	22%	25%	47%	40% - 54%
Your travel behavior and travel history	24%	19%	43%	36% - 50%
Political affiliations and memberships	19%	18%	37%	30% - 44%
Name, address, phone number, and email	18%	17%	35%	28% - 42%

* The confidence interval (CI) for the highlighted column defines the range within which the true population parameter is expected to fall with 95% certainty.

Contributions to the “kappa” – findings from Paper IV:

- ❖ Users do not perceive themselves as having a business relationship with the service provider, leading to an underestimation of non-monetary costs.
- ❖ A significant lack of trust toward service providers was observed.
- ❖ Users have limited knowledge about how service providers operate and their impact.
- ❖ Users expressed concerns about their control over personal assets and the actual power they hold.
- ❖ Some users take conscious steps to protect their privacy, but many lack awareness of design patterns and data usage in personalized advertising.
- ❖ Users value their time but often remain engaged longer than intended.
- ❖ Platforms prioritize their own value creation strategies, sidelining users’ interests.

4.5 Paper V – User-Driven Data Economy

This paper focuses on the user-driven data economy and digital transformation, where new contexts, actors, and relationships emerge. The research explores how users, now producers of valuable data, are changing how value is created across various sectors. The aim is to explore these new aspects of the user-driven data economy, and categorize the fundamental components to develop a basis for further research and practice.

This conceptual study utilizes a literature review to provide an overview of the user-driven data economy and its impact on society and business. By reviewing existing literature from related fields, the research aims to extract and compile insights and patterns. A systematic literature search in databases and thematic synthesis are used to identify and synthesize the overarching themes.

The paper highlights the significant role of the user-driven data economy. With billions of active users on social media daily, users' contributions are central to continuous development. The study gives a classification that clarifies the contexts, actors, and relationships within the user-driven data economy and reflects the emergence of new user types.

Contributions to the “kappa” – findings from Paper V:

- ❖ The user-driven data economy consists of a complex environment with new contexts, actors, and relationships.
- ❖ Concepts and definitions are often used interchangeably, leading to ambiguities about user roles and value creation.
- ❖ Users take an active role as suppliers of personal and creative resources, often without direct financial compensation.
- ❖ Platforms structure revenue models around user interactions and data extraction.
- ❖ Zero-price users access “free” services by paying with data, attention, and effort instead of money.

5

Analysis and Discussion

“Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful.” – Albert Schweitzer¹²

This chapter analyzes the findings based on the research model. Section 5.1 focuses on RQ1, examining the user experience of data collection and utilization among zero-price users. Section 5.2 addresses RQ2, exploring the extrinsic drivers that affect the well-being and working conditions of influencers. Section 5.3 synthesizes the findings from RQ1 and RQ2, and Section 5.4 provides an understanding of the user-driven data economy as a whole.

¹² Schweitzer, A. (no date). *Success is not the key to happiness; happiness is the key to success*. Retrieved from <https://www.goodreads.com/quotes/13122-success-is-not-the-key-to-happiness-happiness-is-the>.

5.1 Zero-Price Users and Non-monetary Costs

This section analyzes research question 1: “*How can non-monetary costs faced by zero-price users be understood from a human-centric perspective?*” This question was formulated to enable a deeper understanding of how non-monetary costs impact users. Previous research has primarily examined personal data from a business-centric perspective. This has left a gap regarding how zero-price users experience the non-monetary costs associated with their contributed resources and the data utilization by the platforms (gap in user experience of data collection and utilization) (Brandimarte et al., 2013; Malgieri & Custers, 2018; Zuboff, 2019). Additionally, studies have shown how the business models of social media platforms are driven by surveillance capitalism (Zuboff, 2019). This highlights the need for a more human-centric understanding of these effects (gap on human-centric understanding). The following analysis and discussion are based on the results from Paper II (Table 6) and Paper IV (Table 7), aiming to address the noted research gaps and answer the first research question.

The empirical results show that users of “free” services experience non-monetary costs that affect their autonomy and control over data, attention, and personal choices. These findings align with Malgieri and Custers (2018), who argue that the information asymmetry between platforms and users creates a need for greater transparency, enabling users to understand the extent of data collection and its long-term consequences. Paper II confirms this by demonstrating that users’ personal data is exploited for the financial gain of platforms, often without users being fully aware of how their data is handled. This reinforces the view that information asymmetry undermines users’ actual control over their digital assets, leading to a perceived loss of autonomy. This loss of control occurs on multiple levels: first, through advanced algorithms that steer user decisions without their awareness, and second, through users’ limited insight into how their data is commercialized. This transition subtly contributes to a deeper, often unnoticed, erosion of user autonomy, extending beyond data privacy into the broader digital experience.

This is particularly evident in the case of social media, which is often described as a source of entertainment (Whiting & Williams, 2013). Findings from Paper II and IV shed more light on this view by showing that this entertainment also can come with non-monetary costs, such as time loss and reduced autonomy in favor of a business-centric value creation. Even when users actively seek entertainment on these platforms, algorithms shape their interactions and extend their engagement beyond their initial intent. These findings are in line with Self-Determination Theory (Deci & Ryan, 1985), which highlights the role of autonomy.

The study also reveals how external factors, such as algorithms and design choices, influence users' intrinsic motivation and self-determination. A key question is how this influence occurs, and one answer is that platforms use nudging (Thaler & Sunstein, 2009), dark patterns (Gray et al., 2018), and feedback loops to personalize content and create an illusion of voluntary engagement. At the same time, these design choices are optimized to maximize engagement rather than well-being.

This study addresses the research gap in *user experience of data collection and utilization*, by validating and expanding the understanding of how information asymmetry and technological optimization contribute to non-monetary costs and a shift to support business-centric value creation. These insights highlight the subtle yet long-term effects of platform design on users' self-determination and well-being, challenging their assumption that these “free” services are truly free.

Regarding the second research gap on *human-centric understanding*, the findings indicate a shift from intrinsic values, such as personal interests and self-directed goals, to extrinsic motivations, where consumption and social validation become central drivers. These results support the findings of Zuboff (2019), who describes how digital platforms' business models, based on surveillance capitalism, are designed to steer user behaviors toward commercial interests. Paper II highlights this shift by showing how platform design, through targeted advertising, algorithms, infinite scrolling, and dark patterns, systematically redirects users' focus from genuine intrinsic drivers to external rewards. Platforms apply behavioral psychology principles to subtly guide users toward extended engagement, often without their active awareness. Papers II and IV

together demonstrate that users' original goals gradually change and become increasingly aligned with platform interests, leading to a conflict where users unknowingly prioritize platform objectives over their own intentions. This gradual transformation creates a multiple cost, as both time and self-determination diminish when voluntary interactions progressively shift toward automated behaviors. These findings also challenge the notion that free services are neutral by exposing the non-monetary costs users actually bear, where their autonomy and intrinsic motivations weaken as platforms' extrinsic goals take priority. In this way, Papers II and IV deepen the theory of surveillance capitalism, by demonstrating how users, often without conscious reflection, seem to be increasingly embedded in the commercial logic of platforms rather than staying aligned with their own core values.

For *research question 1*, the non-monetary costs for “free” service users can be understood as a gradual erosion of autonomy and control over personal data, attention, and behavior. While users may initially experience a sense of freedom through “free” access, these services often entail an information asymmetry where users unwittingly bear the costs of their engagement. These costs manifest as time and attention invested without natural limits, as well as a loss of control over personal data and privacy. For instance, design choices such as infinite scrolling and the absence of natural stopping cues entice users into longer sessions than they might have intended, thereby undermining their autonomy, and negatively affecting their well-being. From a human-centric perspective, these features can be seen as extrinsic drivers steering users towards external goals, such as status and popularity, often at the expense of their intrinsic values. By increasing awareness of these non-monetary costs, particularly regarding advertising, data collection, and design strategies, and offering tools for self-regulation, such as settings to manage screen time and data privacy, users' autonomy and genuine intrinsic drives can be preserved. This approach strengthens their ability to make informed choices, maintain intrinsic motivations, and promote a more sustainable digital engagement. The potential non-monetary costs that form the basis for answering the research question are specified in Table 11.

Table 11. Non-monetary costs for zero-price users.

Motivation States	Potential Non-monetary costs
<i>Intrinsic / Autonomous</i>	
1. Loss of focus on intrinsic, self-determined goals	Users' focus on their own long-term goals is gradually replaced by extrinsically driven distractions and external stimuli. This leads to diminished autonomy and long-term satisfaction.
2. Information overload	An abundance of information makes it challenging for users to maintain focus on personal core values. Information overload can create fatigue, diminishing their sense of direction and well-being.
3. Absence of natural stopping cues and health-related costs	Platform designs featuring infinite scrolling and a lack of natural stopping points often result in users spending more time than intended. This impacts their health and reduces control over their behavior and daily routines.
<i>Extrinsic / Autonomous</i>	
4. Shift toward extrinsic motivations through platform design	Platforms entice users to focus on external rewards, such as social validation and short-term entertainment, rather than intrinsic goals and satisfaction. This shift reduces users' autonomy and promotes a consumption-oriented mindset.
5. Exposure to negative content and idealized lifestyles	Users are frequently exposed to negative and polarizing content, affecting their self-image and mental health. Exposure to idealized lifestyles shifts priorities toward status and material goals over personal values.
<i>Extrinsic / Controlled</i>	
6. Loss of personal privacy and control over data	Users risk losing control over their personal data, undermining values such as privacy and self-determination. Platform optimization increasingly prioritizes platform goals at the expense of users' non-monetary costs.

5.2 Content Creators and Non-monetary Costs

This section analyzes research question 2: *“How can non-monetary costs associated with the work of content creators, particularly social media influencers, be understood from a human-centric perspective?”* This question was designed to explore the non-monetary costs affecting content creators. These costs are difficult to identify and have received limited attention in previous research. While prior studies have explored influencers’ external success metrics, such as follower counts and financial gains, they often overlook the subtler, human-centric costs of content creation. These include emotional strain, as a result of external pressures from algorithms, followers, and sponsors (gap on extrinsic drivers that affect well-being) (Baccarella et al., 2018; B. Duffy & Wissinger, 2017; Haenlein et al., 2020; Raun, 2018). Furthermore, tension between influencers’ core values and the commercial objectives of platforms highlights the need for a deeper understanding of how these costs influence their long-term well-being and self-determination (gap on working conditions) (Cotter, 2019; B. Duffy & Hund, 2015). The following analysis and discussion build on the results from Paper III and Table 8, aiming to address the identified research gaps and provide an answer to the research question.

This study reveals that influencers often begin their careers with strong intrinsic motivation, where creative freedom and personal values take priority and stay in focus. Paper III highlights how this drive is rooted in a genuine passion for creation, with commercial incentives playing little to no role initially. One influencer expressed this sentiment, stating, *“Curiosity is my main driving force,”* illustrating the connection between the creative process and their intrinsic values.

This observation aligns with previous research (Haenlein et al., 2020; Raun, 2018), which emphasizes that early career stages for influencers are characterized by creative independence and authenticity rather than external rewards. However, as influencers become embedded within platform structures, a gradual transformation occurs, where their autonomy is eroded by external pressures. Paper III identifies multiple factors behind this shift, including algorithmic priorities, audience expectations, and commercial incentives, which increasingly influence content production.

Earlier studies (B. Duffy & Wissinger, 2017; Khamis et al., 2017) show that platform business models create conditions in which influencers adapt their content to maximize visibility and engagement, often at the expense of their creative ambitions. Platform logic favors certain types of content, leading influencers to unconsciously steer their creative output toward engagement-based reward systems rather than personal expression. Audience response further reinforces the expectations to maintain a specific appealing or thematic approach, restricting opportunities to experiment freely, which provides more depth to the studies conducted by Cotter (2019) and Duffy and Hund (2015).

Additionally, sponsors and commercial partnerships introduce another layer of external control through branding and messaging requirements, which can gradually strip influencers of the control over their creative decisions (Abidin, 2016; Cunningham & Craig, 2019). Paper III demonstrates that this transformation is often subtle but has long-term effects, as influencers rarely reflect on how their creative decision-making evolves over time. What begins as an autonomous, creatively driven process shifts toward strategic adaptation, where external factors dictate direction. These findings also provide insights to prior research (Fumagalli et al., 2018; Zuboff, 2019), by providing evidence how digital platforms, through their structures and incentives, progressively shape users' motivations, often without their conscious awareness.

A key insight from Paper III is the importance of balancing autonomy with a degree of stability to avoid the negative consequences of economic insecurity. In this context, stability does not imply a restriction of freedom but rather the preservation of one's ability to make independent decisions without gradually losing control over one's work. For instance, Paper III highlights that influencers who become entirely dependent on platform business models and sponsorships risk gradually sacrificing their creative freedom.

One way to counteract this process is to balance commercial projects, such as sponsored content or financially stabilizing commitments, with independent creative endeavors where influencers retain full freedom of expression. Paper III shows that this strategy serves as a stabilizing force, not to limit autonomy, but to ensure its long-term sustainability. However, an overemphasis on autonomy without sufficient financial

stability can undermine creators' ability to sustain their work, just as an excessive focus on income can lead to creative restrictions and external control. This insight offers a nuanced extension of Self-Determination Theory (Deci & Ryan, 1985), demonstrating that a certain level of structured income can act as a buffer against subtle external pressures that might otherwise dictate creators' decisions. In this sense, stability is not the opposite of autonomy but rather a necessity for influencers to maintain independent decision-making without being gradually pushed toward a more controlled state.

Paper III also highlights how follower donations can serve as an alternative income stream that strengthens influencers' autonomy and independence. Unlike sponsors, who often influence the direction of content, donations allow influencers to create on their own terms and stay true to their intrinsic values. Respondents describe these contributions as a genuine form of appreciation that fosters a balance between private life and work, which supports Self-Determination Theory's focus on autonomy as a foundation for well-being. Consistent with Fumagalli et al. (2018), donations emerge as a human-centric and sustainable alternative to commercial collaborations, without needing to conform to external demands. Overall, by introducing a new perspective on the balance between autonomy and control in a commercialized data-driven environment, the study adds a new layer to Self-Determination Theory (Deci & Ryan, 1985) by illustrating how a degree of control can create a secure foundation for sustained autonomy, providing an answer to the gap on *extrinsic drivers that affect well-being*.

Regarding the second gap concerning working conditions, the findings reveal that influencers who prioritize intrinsic goals and creative values often experience greater satisfaction and long-term motivation, highlighting how the loss of intrinsic drives can undermine their sense of purpose and fulfillment. This is evident in Paper III, which presents concrete examples of how the transition from intrinsic to extrinsic goals negatively impacts influencers' well-being. Influencers who adjust their content to meet sponsor and algorithm demands often report a decreased sense of joy and satisfaction in their work. They describe how external pressures complicate the balance between their professional and personal lives, leading to reduced long-term motivation and increased work-related stress.

This contrasts with influencers who are driven by follower counts and sponsorships, which align with a business-centric perspective, as highlighted by, e.g., Campbell and Grimm (2019).

A central consequence of this transformation is the gradual blurring of the boundary between private and public life, which affects influencers' perceived autonomy and sense of privacy. Paper III demonstrates that many influencers feel compelled to share more personal aspects of their lives than they initially intended to maintain engagement and stay competitive. This includes private information, family matters, and relationships, where the audience's demand for access influences their decisions. This process is driven by platform reward systems, which tend to favor more personal content by increasing visibility and engagement (Bishop, 2021; Petre et al., 2019). As a result, influencers' autonomy is not only restricted by sponsors and algorithms but also by an invisible norm where personal exposure is expected. Over time, this shift can erode their sense of self-determination, as their lives become increasingly shaped by audience expectations rather than their own personal boundaries. These findings align with Self-Determination Theory (Deci & Ryan, 1985), which argues that environments that emphasize external goals at the expense of intrinsic values tend to reduce individuals' well-being and engagement.

Beyond commercial and algorithmic pressures, Paper III also highlights the emotional burden influencers experience from their audience, which directly affects their autonomy and well-being. When the relationship with followers becomes a central part of an influencer's identity and financial security, it can create a psychological dependency. Many influencers feel that they must always be available and interact with their audience to maintain engagement and relevance. This phenomenon is reinforced by platform reward systems, where interactions and follower count function as a form of social currency (Cotter, 2019; A. Duffy & Kang, 2020). This implies that influencers are not only influenced by sponsor expectations but also by audience demands, which can lead to emotional exhaustion and a gradual loss of self-determination.

The erosion of intrinsic motivations is further intensified by platform algorithms that prioritize content generating high engagement over genuine authenticity. Paper III demonstrates how these structures

contribute to a long-term commercialization of influencers' work, where creative values are gradually replaced by market-oriented goals. This leads influencers, who were once driven by intrinsic values, to feel increasingly detached from their original goals.

The findings address the second gap on working conditions by showing how platform structures and commercial pressures shape influencers' shift from intrinsic motivation to external demands. Paper III also sheds light on how engagement-based reward systems contribute to a blurring of personal and professional boundaries, reinforcing emotional strain and a sense of dependency on external validation. In doing so, the research expands the understanding of how influencers' working conditions evolve under platform logic and commercial incentives.

To conclude the answer on *research question 2*, non-monetary costs in the work of influencers emerge as a gradual loss of autonomy driven by external pressures from sponsors, followers, and algorithms. These demands push influencers to prioritize quantitative metrics, such as sponsorship deals and follower counts, over intrinsic values. As this shift occurs, influencers often feel compelled to share more personal details, sometimes involving loved ones, which introduces privacy challenges.

However, as sponsors and algorithmic structures gain more influence over their work, the focus shifts to external success metrics. Paradoxically, this external success can diminish internal motivation and well-being, as the creative freedom that initially inspired their work becomes increasingly restricted. The study shows that a balance between autonomy and controlled tasks is of importance for achieving well-being. Excessive autonomy can lead to financial insecurity, while too much control can have a negative impact on creativity. Hence balancing financially secure assignments with autonomously creative projects allows influencers to maintain a stable income while safeguarding the creative freedom that supports well-being. Table 12 specifies the underlying potential non-monetary costs that form the basis for the answer to the research question.

Table 12. Non-monetary costs for content creators.

<i>Dimension</i>	<i>Potential Non-monetary costs</i>
<i>Intrinsic / Autonomous</i>	
1. Erosion of intrinsic motivation and focus on quantitative metrics and commercial growth	Influencers' intrinsic motivations and connection to their authentic values risk erosion as commercial demands and quantitative goals, like follower counts and engagement rates, are prioritized. This shift from creative freedom to external rewards can reduce long-term satisfaction and a sense of purpose in their work, while the constant pressure to perform may lead to fatigue.
<i>Extrinsic / Autonomous</i>	
2. Emotional strain from relationships with followers	Investing in relationships with followers often involves unpaid emotional labor, which can lead to emotional exhaustion. Balancing personal values with follower expectations risks straining emotional well-being, making these relationships challenging to manage in a sustainable way.
<i>Extrinsic / Controlled</i>	
3. Loss of personal privacy and boundaries between private / public	Content creators risk losing autonomy over their personal privacy and boundaries, especially when followers and sponsors expect complete transparency. This increases their vulnerability, both for themselves and their loved ones, potentially blurring the line between private and public life.
4. Loss of autonomy and intrinsic motivation due to external demands from sponsors, algorithms, and followers	External control from sponsors, algorithms, and followers erodes influencers' autonomy and can undermine their original motivation. Platform designs that favor quantitative metrics reinforce this development, potentially leading to psychological strain and a sense of vulnerability, affecting their long-term well-being and motivation.

5.3 Non-Monetary Costs faced by Social Media Users

The previously discussed insights on zero-price users and content creators are now synthesized into an illustration that highlights the balance between social media users’ intrinsic and extrinsic motivations, as well as the underlying degree of autonomy and control. The illustration, as visualized in Figure 10, demonstrates how these dimensions influence users’ and content creators’ experiences, long-term well-being. Below follows a description of the model’s four states (1–4).

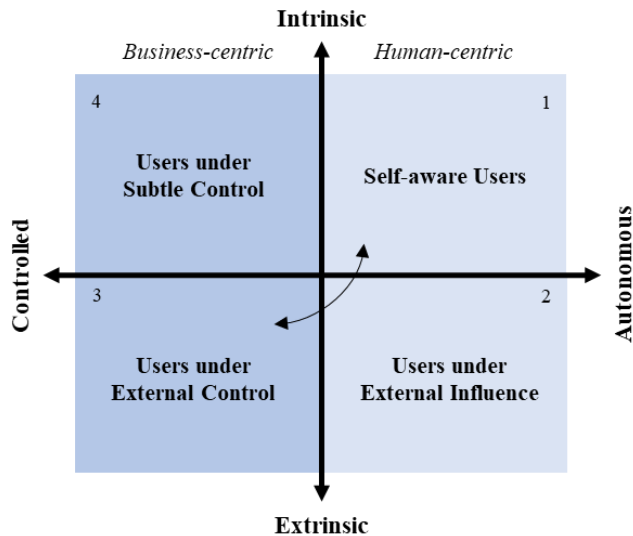


Figure 10. The figure illustrates the implications for social media users, divided into four states, where value creation is more human-centric on the right and more business-centric on the left.

1. Self-aware users (Intrinsic / Autonomous)

Self-aware users are social media users who have a strong sense of autonomy and self-control. They act based on their own intrinsic motivations and make decisions aligned with personal values and long-term goals, placing them in the upper right quadrant of the model (state 1).

For zero-price users, this means engaging selectively in digital activities and approaching platform offerings with a critical mindset. They carefully choose their interactions to minimize non-monetary costs, such

as time loss and reduced autonomy. Paper II highlights how some zero-price users maintain their self-determination by limiting their platform use and questioning algorithmic influences on their consumption patterns. For content creators, this involves balancing sponsorship demands and algorithmic pressures without compromising their creative ambitions. Paper III illustrates how certain influencers consciously reject sponsorships that do not align with their personal values. This aligns with Duffy and Hund (2015), who emphasize that influencers who resist commercial pressures maintain greater authenticity and long-term autonomy, despite external incentives encouraging market-driven content adaptation.

At the same time, autonomy is not static but constantly negotiated. Influencers who begin in this state, driven by personal interests and creative ambitions, may gradually experience a shift in motivation. Paper III highlights how engagement-based reward systems, such as likes, shares, and comments, function as reinforcements that subtly reshape behaviors over time. While their decisions remain autonomous, external incentives, particularly financial opportunities through sponsorships and advertising, can start playing a larger role in shaping their creative choices. What starts as an expression of personal creativity gradually incorporates more strategic considerations, where maintaining visibility and financial stability become increasingly important.

2. Users under external influence (Extrinsic / Controlled)

Users under external influence are positioned in the lower right quadrant of the model (state 2). These users are characterized by a certain degree of autonomy, but an increasing reliance on extrinsic factors such as recognition, financial incentives, and audience response. While they still have control over their choices, there is a gradual shift in motivation, where external rewards start playing a larger role in shaping their decisions. Paper III highlights that influencers who start their careers with a strong creative vision may move from self-driven creativity toward a more engagement- and income-oriented approach. This transition is often subtle rather than immediate, shaped by platform reward systems, audience expectations, and financial incentives (B. Duffy & Wissinger, 2017; Khamis et al., 2017). What begins as minor adaptations to optimize visibility and growth gradually shifts content strategies over time.

The growing influence of sponsorships, algorithmic incentives, and social validation means that what was once a personal and creative pursuit increasingly incorporates strategic considerations. Influencers do not necessarily perceive this as a loss of autonomy, but external structures start to influence their creative priorities in ways that may not be immediately apparent. This aligns with Cotter (2019), who describes how influencers optimize their material for engagement, often adjusting creative decisions in response to platform logic and audience behavior. The increasing weight of external pressures does not mean that influencers lose all autonomy but rather that their decision-making becomes a balance between personal goals and commercial strategies.

At the same time, as external incentives become stronger, the transition toward state 3 (external control and commercial adaptation) takes form. Paper III demonstrates that influencers who initially balance creative freedom with commercial considerations may eventually find themselves adapting more frequently to external demands rather than their original vision. While many still retain a degree of control, the pressure to align with platform expectations and sponsor interests begins to take priority. This shift is often not the result of a single decision but rather a series of incremental changes that, over time, shape the overall direction of their work.

3. Users under external control (Extrinsic / Controlled)

This user group is positioned in the lower left quadrant of the model and is defined by increased control and a strong extrinsic motivation (state 3). At this state, social media users, particularly influencers, have gradually lost much of their self-determination and are now increasingly governed by external forces such as sponsorships, platform algorithms, and audience expectations. This means that their initial success has led to a growing dependency on external demands. Paper III describes how influencers who once had full creative freedom become more reliant on sponsorships and advertising revenue, experiencing increased pressure to adjust their content to market and audience expectations instead of staying true to their creative vision.

As this influence intensifies over time, the transition to a more externally controlled position becomes evident. What was once perceived as freedom to optimize content for engagement turns into a stronger reliance

on commercial collaborations and platform priorities. Paper III shows that this change often happens gradually rather than abruptly, with influencers making small but continuous adjustments to secure financial stability.

Furthermore, audience and market expectations increasingly dictate content strategies, leading to a shift where visibility and income security become primary concerns. This particularly affects influencers who start optimizing their content based on sponsor demands rather than their own creative preferences. As reliance on sponsorship revenue increases, creative self-determination gradually diminishes, sometimes resulting in a sense that external expectations rather than personal ambition are shaping their work. Over time, this shift not only influences creative choices but also alters motivational structures, moving from autonomously driven initiatives to a more externally controlled creative process. Paper III suggests that this may lead to long-term motivational struggles, and in some cases, burnout, as influencers find themselves managing an increasing disconnect between their initial aspirations and the commercial realities of their profession.

4. Users under subtle control (Controlled / Intrinsic)

Subtly controlled users are positioned in the upper left quadrant of the model and primarily represent zero-price users whose digital engagement is gradually shaped by external factors (state 4). They experience a false sense of autonomy, believing they act out of their own free will, while in reality, their behaviors are directed by platform structures, norms, and algorithms. Paper II illustrates how infinite scrolling, push notifications, and personalized recommendations progressively influence user behavior. This aligns with Gray et al. (2018), who describe how “dark patterns” subtly manipulate user engagement, as well as Spiekermann and Korunovska (2017), who highlight how personalized recommendations systematically shape digital consumption habits without explicit user awareness. Some factors influencing zero-price users are similar to those shaping influencers, such as algorithm-driven recommendations, engagement-based reward systems, and social validation. However, this study does not provide enough evidence to determine whether zero-price users experience the same gradual shift toward external control. This remains an area for further exploration.

5.4 Social Media Users in the User-Driven Data Economy

Based on insights from Paper I, Paper V, Table 9, and the research questions, the user-driven data economy, along with its contexts, actors, and relationships, will now be synthesized and explained.

The user-driven data economy operates through the interplay of platforms, content creators, zero-price users, consumers, sponsors, and third-party actors, among others, where value creation is distributed and business relationships are often complex, as illustrated in Figure 11.

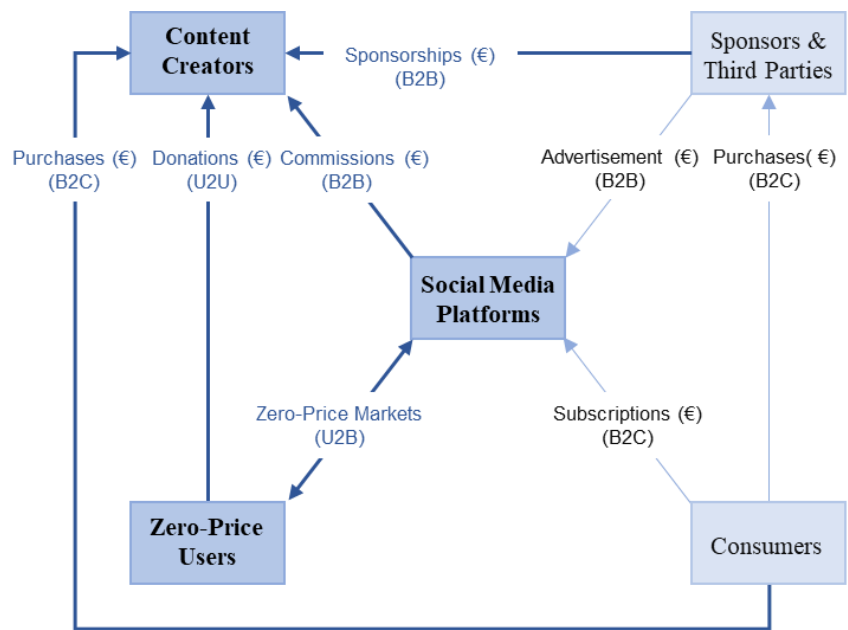


Figure 11. The figure exemplifies how the user-driven data economy, along with its contexts, actors, and relationships, can be understood.

One key actor in this economy is the content creator, whose primary resource consists of creative works that often fall under intellectual property rights and are distributed via social media platforms. By publishing their content, they enable a mutually dependent relationship, where platforms facilitate distribution, generate visibility and interaction, and in many cases provide direct or indirect financial compensation.

Paper I, Paper V, and Paper III highlight that these compensations can originate from multiple sources, including sponsorships, advertising integrations, platform revenue sharing, and voluntary donations from users. In some cases, content creators develop their own products or services for direct sales to consumers, further positioning them in a hybrid role between creators and entrepreneurs.

Zero-price users also play a central role in this economy. Paper I, Paper II, and Paper V show that their interactions serve as a core resource for platforms, where personal data, attention, and behavioral patterns are used to optimize advertising flows and engagement strategies. These studies emphasize that users are not merely passive recipients of content; their activities, such as commenting, sharing, and viewing, shape the commercial structure. Even though they do not pay monetarily for the service, their data generates economic value by enabling targeted advertising and marketing strategies. One example of this dual role is how platforms collect and aggregate behavioral data. Paper I and Paper V show that platform business models rely on selling collected data to third parties, meaning that users inadvertently participate in a commercial process where their digital footprint becomes a monetized asset (Acquisti et al., 2016; Zuboff, 2019).

The relationships between these actors can be understood through the various business models that operate simultaneously. Figure 11 categorizes these interactions as Business-to-Business (B2B) and Business-to-Consumer (B2C) but also includes User-to-User (U2U) to represent direct relationships between zero-price users and content creators. Additionally, an underlying User-to-Business (U2B) relationship exists, where platforms retain full control and visibility over communications, enabling them to commercialize user interactions. Paper III, IV, and V highlight how this asymmetrical structure often leaves users unaware of how their data is monetized and resold, raising concerns about the blurred lines between private and commercial digital interactions.

These relationships and role distributions also reveal terminological inconsistencies in digital economy research. In traditional economic theory, a consumer is defined as someone who pays for goods or services (Eckhardt & Bardhi, 2020; Parasuraman & Grewal, 2000; Webster,

2000), whereas a user may participate in an economic system without engaging in monetary transactions. Paper I and Paper V emphasize that this distinction is particularly relevant in the data economy, where users generate value through their interactions rather than direct purchases. Consequently, classifying all social media users as consumers is misleading, as they often act as resource providers rather than customers in the traditional sense. A useful analogy is a bottle deposit system: a person purchasing a beverage is a consumer, but when they return the bottle for recycling, they contribute a resource back into the system rather than continuing to consume. Similarly, a social media user consumes content but simultaneously generates data and engagement that create value for the platform. The distinction between the noun “consumer” and the verb “consume” is particularly notable. In line with the insights from this dissertation, the term “consumer” is strictly tied to monetary consumption within the economic system, whereas different user types are associated with non-monetary consumption and may act as providers of various resources to the economic system. Paper V underscores this distinction, emphasizing the need for concepts that accurately reflect economic relationships, rather than relying on traditional consumption models.

It is also important to note that even when two zero-price users exchange information directly in a User-to-User (U2U) relationship (not illustrated in Figure 11), this interaction itself does not constitute part of the data economy. However, the same users simultaneously maintain an implicit business relationship (U2B) with the social media platform, which transforms their private exchange into an economic asset. The platform has full access to these interactions, allowing it to store, analyze, and utilize the exchanged information for commercial purposes. This includes tailoring personalized advertising flows or selling aggregated data to third parties, often without users being fully aware of this parallel business relationship.

A key distinction between money and personal assets as resources in transactions (see Figure 2) is that while money is tightly regulated and controlled by financial institutions, personal assets, such as data and engagement, lack the same level of centralized oversight. As a result, users have limited control over how their personal assets are collected, used, and monetized by the platforms.

6

Conclusion

“Money, as it turns out, is very often the most expensive way to motivate people. Social norms are not only cheaper, but often more effective as well.” – Dan Ariely¹³

This concluding chapter summarizes the study’s key insights and reflections. In section 6.1, the research findings are synthesized. Sections 6.2 to 6.5 address the implications for research, social media users, platform companies and sponsors, as well as policymakers. Finally, Section 6.6 discusses the dissertation’s limitations and potential future research areas.

¹³ Worth Books. (2017). *Summary and analysis of Predictably Irrational: The hidden forces that shape our decisions (Based on the book by Dan Ariely)* (p. 30). Open Road Integrated Media.

6.1 Concluding Remarks on the Aim

The aim of this dissertation was to explore social media users as active economic actors within the user-driven data economy from a human-centric perspective. It examined their value creation processes as zero-price users and content creators, with a specific focus on their non-monetary costs. The following conclusions have been reached and will be further elaborated and explained in the following paragraphs:

- ❖ Users of zero-price services often lack awareness and access to tools that could help them recognize and understand the non-monetary costs involved in using “free” services.
- ❖ Content creators currently lack a culture and framework that supports their intrinsic motivation. Traditional success metrics, such as likes, wealth, and fame, combined with external pressures from followers, platforms, and sponsors, shift the focus from internal drivers like creativity and enjoyment to external performance goals. This shift impacts both the quality of the content and the well-being of creators.
- ❖ The user-driven data economy is increasingly complex, with new types of actors and relationships emerging. Traditionally, users have primarily been viewed as passive consumers. However, this dissertation highlights how they also function as a productive resource in an economy built on co-created value. This underscores the need for a deeper understanding of these structures and greater clarity regarding new contexts, concepts and their interconnections.

This study supports the foundational assumption in (Mileros, 2020) that users have transitioned from being passive consumers to becoming active participants in a user-driven data economy. This interconnected economic system blends resources and value creation from both companies and users. However, users currently lack the same level of support as established economic actors, and this imbalance seems to further be exacerbated by the informational advantage that companies hold. As a result, there is an urgent need for research, tools, knowledge, and insights that prioritize users’ value creation and well-being.

By applying a human-centric perspective, the research emphasizes the importance of understanding users' experiences and roles. Shifting the focus from platform power structures to individuals' motivations and contributions, the dissertation provides a more nuanced view of how users manage to maintain a balance between their own value creation and that of companies. The study also highlights non-monetary forms of value, such as creative work and user engagement, which can generate significant value for companies at the personal expense of users. These costs are often less visible and can for instance manifest as time investment, mental and emotional strain, or reduced privacy.

6.2 Implications for Research

For research, three key implications were identified. *First*, the dissertation provides a clearer depiction of the user-driven data economy, along with its concepts and components. It highlights users' contributions, such as their time and attention, and how these resources are leveraged within platform business models. This contributes to a deeper understanding of the imbalance in information asymmetry and surveillance capitalism (Zuboff, 2019), where many users perceive digital services as “free” without reflecting on how their engagement constitutes valuable resources for platforms.

Second, the dissertation has deepened the knowledge regarding the widespread prioritization of extrinsic quantitative success metrics, such as follower counts, and how they affect motivation and well-being of influencers. When focus shifts toward these external markers, these individuals risk losing their intrinsic drive and sense of purpose. Findings from Paper II and Paper IV indicate that influencers with greater awareness and a clearer understanding of their intrinsic motivations experience fewer psychological costs and are more resilient against falling into dependency on external control (Kasser & Ryan, 1993; Solove, 2021; Zuboff, 2019).

Third, the dissertation deepens the understanding of the non-monetary costs that social media users bear. For instance, the duality between users' perceived benefits and their non-monetary costs, showing that even seemingly positive aspects, such as excessive consumption of information, can negatively affect well-being. The study contributes to

the literature by illustrating how zero-price markets influence social interactions, leisure time, and users' ability to recognize the long-term consequences of their personal value creation (Acquisti et al., 2016; Dallas and Morwitz, 2018; Fan et al., 2022; Newman, 2018). The findings reinforce the argument that users' data and attention function as an implicit currency (Davenport & Beck, 2005; Jarman & Örsal, 2020; Spiekermann & Korunovska, 2017), one that users themselves often undervalue.

Fourth, the dissertation contributes to a new theoretical contribution on the development and understanding of the human-centric perspective in relation to social media users as economic actors. Individuals are not driven by innovation and growth in the same way businesses are. Instead, their motivations stem from a pursuit of both extrinsic and intrinsic value, as well as the need to balance control, free choice, and external influence.

6.3 Implications for Social Media Users

Today's social media users belong to the first generation managing digital presence, meaning there are no established guidelines for maintaining a balanced digital life, responsible engagement, or a sustainable culture. Hence, increased awareness is of importance for all type of users. However as zero-price users and content creators have both slightly different roles and challenges, the following recommendations, based on my findings, are customized for each user type.

Recommendations for Zero-Price Users

First, take control of your digital engagement. By reflecting on your values and setting boundaries for digital activity, you can regain control and prioritize your goals. Ask yourself, “*Why am I really doing this?*” Set your own stopping cues, such as limiting screen time to a specific duration, like one hour at a time. Create balance by making space for family, exercise, and hobbies. Increase the threshold for unnecessary use by for instance requiring a manual login each time. Promote responsible behavior by respecting both your own and others' privacy while considering the long-term consequences of your digital presence. Your genuine core values can also be cultivated through altruism, philanthropy, and mentorship.

Second, prioritize autonomy over restriction. Develop awareness of when your consumption serves your own interests and recognize the point where it shifts toward “empty values” (Hari, 2019).

Third, buy your way out of non-monetary costs. Become more aware of how information and advertising influence your core values. A practical approach can be paying for premium services on frequently used platforms to reduce intrusive advertising and to protect your personal resources.

Fourth, use these services for your benefit. Invest in yourself and others, and spend time on activities that align with your interests and personal development. Encourage meaningful screen time, such as learning programming, mental growth, or activities that shape your future. Prioritize platforms and content that reflect your values, and consider supporting these services and content creators financially through donations or other means.

Recommendations for Content Creators

First, stay true to your core values. Avoid or be cautious with opportunities that do not align with your core values.

Second, set clear boundaries. Despite the flexibility of your work, establish clear separations between private and public life, work time and personal time.

Third, build buffers. Strengthen your resilience by keeping financial buffers, preparing content ahead of time, and scheduling posts. Use digital tools to reduce the need for constant connectivity, allowing time to rest and recover.

Fourth, be a responsible role model. Encourage responsible behavior and take part in mentorship programs. Work together with colleagues to improve the profession, working conditions, and support systems.

Fifth, minimize your exposure to negative feedback. Measure success in the long term. Use platform tools to filter out negativity, and build a supportive network.

Sixth, find your balance between financial stability and intrinsic motivation. Establish your comfort level. Extrinsic motivators like likes, followers, and fame may be appealing, but focus on building a loyal audience rather than chasing trends to reduce stress and create a sustainable foundation for your future.

6.4 Implications for Platform Companies and Sponsors

Platform companies and sponsors shape digital environments, influence user behavior, and balance business interests with user autonomy. This study highlights the importance of considering a human-centric perspective in platform design and monetization strategies. Recognizing users' non-monetary costs, such as time investment and data exchange, provides insights into how digital business models impact users beyond financial transactions. Findings indicate that trust and transparency are central aspects of long-term engagement. Users express an interest in alternative business models, including premium services and donation-based options, suggesting a demand for greater flexibility in how services are structured. Based on these aspects, platform companies and sponsors have the opportunity to develop approaches that align with business goals in combination with human-centric goals and user well-being. Building on these findings, a number of recommendations have been formulated.

First, offer alternative solutions. Providing alternative options, such as a variety of premium services alongside “free” services, can be meaningful for enhancing well-being. Users themselves indicate an interest in business models based on one-time or lifetime payments, which were also found to be more desirable than “free” services.

Second, work toward building trust. According to the study's findings, trust is a key factor for users. Companies can balance their growth goals and business interests in ways that promote user well-being, in alignment with a human-centric perspective. This involves ethical responsibility, ensuring that user well-being is at the forefront. Companies can also take steps to reduce subtle influence, enhance transparency, and eliminate dark patterns from their platforms.

Third, protect users' personal resources and values. The study highlights the information and knowledge advantage held by platforms, which makes it essential to foster balance through increased transparency and a more ethical approach to users' personal values and their investments. For sponsors, this can be achieved by clearly communicating objectives while allowing influencers the freedom to determine how messages are conveyed to their audience. This approach supports autonomy and motivation.

Fourth, distinguish between system optimization and user optimization. Technological advancements and business models can be optimized for various purposes, but this does not mean that user behavior should be included as part of this optimization. The study highlights the importance of balancing system and business model objectives with individual experience and self-determination. When developing optimization strategies, it may therefore be relevant to understand how they influence user autonomy and well-being, rather than shaping behavior to align with system or business model interests.

6.5 Implications for Policymakers

This study highlights how digital platforms structure user behavior, influence economic conditions, and introduce new forms of engagement that extend beyond traditional models. The findings suggest that policy approaches can take different paths, balancing legal frameworks with cultural initiatives. While regulation provides a structural foundation, cultural shifts may play an equally important role in shaping responsible digital engagement. Furthermore, a deeper understanding of influencers' working methods and economic role could further inform policy discussions on the future of digital labor and market structures. Based on these findings, the following recommendations have been outlined for policymakers.

First, use cultural development as a complement to legislation. The study highlights that influencers, in particular, lack institutional support and would benefit from greater societal backing through incentives that encourage responsible engagement. For example, social media has been

banned for children under 16 in Australia¹⁴, demonstrating a regulatory approach. However, cultural initiatives could serve as a substitute or complement to legislation, operating through a bottom-up approach by promoting positive role models.

Second, further develop this instrument for increased societal benefit. Ariely (2008) emphasizes this through the statement: “Money, as it turns out, is very often the most expensive way to motivate people. Social norms are not only cheaper but often more effective as well.” Events such as the GameStop¹⁵ phenomenon and the Cambridge Analytica scandal illustrate how collective user actions can significantly impact markets and societal developments. While marketers and sponsors have capitalized on the potential of social media, academics and policymakers could further utilize these platforms to disseminate research and information directly to users.

Finally, use influencers’ working methods as a model or complement for transformative shifts in economy. The study describes how influencers often have a unique approach to economic activity, which can serve as a complement to traditional economic models. They do not always compete in conventional ways but are often driven by altruistic motives, engage in donation-based funding, combine hobby-driven activities with commercial ventures, build personal brands, maintain strong connections with their audience, and act as bridges between culture and the economy. These elements could be harnessed and further developed into a model that meets future economic challenges for both businesses and individuals.

6.6 Limitations and Further Research Directions

In this study, I have employed case studies and cross-sectional studies as research methods. The study is also based on a specific knowledge base and a literature review, which means that relevant theories that were omitted could have provided additional insights and a deeper understanding of the phenomenon. A methodological limitation has been the focus on influencers, which means that other groups of content

¹⁴ <https://www.bbc.com/news/articles/c89vjj0lxx9o>

¹⁵ https://en.wikipedia.org/wiki/GameStop_short_squeeze

creators, such as musicians, or hobby bloggers, have not been examined to the same extent. This may affect the generalizability of the findings but opens up opportunities for future research that could include a broader range of digital creators.

A particularly relevant aspect for future research is non-monetary costs and their impact on user decision-making and behavior. There is a need to systematically identify and categorize these costs and examine their implications for social media users. Since these costs are often less visible, they can be more difficult to recognize, which means that users rarely reflect on their long-term effects. These costs also contrast with Prospect Theory (Kahneman & Tversky, 1979) and the concept of loss aversion, which suggests that people tend to avoid losses more than they seek equivalent gains.

Another possible research avenue is to examine business models for influencers and perhaps also for users in general (such as personal models based on the management of personal resources). Many influencers build their income streams through short-term collaborations and platform-driven algorithms, yet there is limited research on how sustainable business models could be developed to ensure greater long-term financial stability.

Beyond these research trajectories, there is also a need for policy-oriented support to aid platforms, companies, and legislators in better managing and protecting users' digital rights. This could include guidelines for transparency in data management, algorithmic influence, and economic structures, as well as the development of models to minimize the negative effects of non-monetary costs that affect well-being.

Finally, and as Simon (1957) already identified, human decision-making is characterized by bounded rationality, where individuals often settle for a sufficiently good solution rather than striving for the optimal one. This insight is particularly relevant in today's digital context, where users continuously make decisions in an information environment designed to maximize engagement rather than to promote well-founded choices, which also could be a pathway for further studies.

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PART II

Papers

The papers associated with this thesis have been removed for copyright reasons. For more details about these see:

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Linköping Studies in Science and Technology, Dissertation No. 2432, 2025, Department of Management and Engineering, Linköping University, SE-581 83 Linköping, Sweden

www.liu.se

Digital platforms and social media have created an economy where users not only consume but also contribute personal resources such as personal data, attention, and content. This dissertation explores this value creation and how users are affected by current norms and accumulate non-monetary costs that can impact their well-being. The study takes a fundamental step towards addressing the complex challenges that users face in an emerging user-driven data economy by adopting a human-centric perspective based on human core values.

Martin D. Mileros has an interdisciplinary background spanning academia, industry, and innovation systems. He holds a Licentiate degree in Industrial Economics, a Bachelor's degree in Business Administration, and an MSc in Computer Science. Over the past decade, Martin has focused on areas such as digitalization, system transformation, and societal development, with a particular interest in how users can realize value in a sustainable way within our digital world.