

# MASTER'S THESIS

## Power and control in affiliate marketing partnerships and the role of algorithmic transparency

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# Power and control in affiliate marketing partnerships and the role of algorithmic transparency

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## Abstract

Affiliate marketing has been the preferred type of marketing for many online fashion merchants working with Fashion Recommendation Systems. This marketing model has grown into a platform-based ecosystem, where publishers, merchants, and affiliate networks are the main actors. Digital platform ideology predicts partnerships of value co-creation. In reality, the partnerships suffer from dependency and power imbalance, making the partnerships vulnerable to risks of high costs and partnership termination. The opaqueness of (FRS) algorithms adds to the need to cling onto the affiliate marketing triad. Empirical data, stemming from a single case study in the Netherlands, reveals that algorithmic transparency could aid in a more collaborative partnership between publisher and merchant. This could move them towards an ecosystem suffering from less power dependency and vulnerability issues. However, applying algorithmic transparency has its limitations, such as the complexity and transparency paradox. Further research is urged to design a campaign performance steering mechanism, based on algorithmic transparency.

## Key terms

*Algorithmic transparency, affiliate marketing partnerships, digital platform ecosystems, recommendation systems*

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## Summary

Affiliate marketing has become a main marketing tool for online fashion retailers (merchants). To reach new and existing customers, it's beneficial for a merchant to have their products appear in a Fashion Recommendation System (FRS). These recommendation systems recommend products to consumers, driven by an algorithm. Based on a commission model, the FRS gets paid by the merchant for a generated lead or sale. Affiliate networks connect FRS-publishers and merchants and provide technology to measure campaign performance.

This structure has formed an ecosystem, where the actors have a dependency towards each other. Scholars have described an ideology of value co-creation in this ecosystem and provided a peak into other sectors where the ideology is not being met. These platform ecosystems are driven by power dependency, exposing the partnerships within to vulnerabilities. This thesis has researched what these structures look like in the context of affiliate marketing partnerships of Fashion Recommendation Systems. Besides that, this thesis explores the role algorithmic transparency can play in improving these partnerships.

By conducting a single case study on a FRS and partners in the Netherlands, empirical data was gathered. The research consisted of semi-structured expert interviews, with (former) employees of the FRS, an affiliate network, and fashion merchants.

The main outcomes indicated that the actors in the ecosystem are aware of positions of power. There has been a shift in power, from publisher towards merchant. The dominance of the FRS has forced merchants into a position that turned the tables. Where merchants were put to the choice to accept the terms of the publisher or terminate the partnership, they often chose the latter. This decision was mainly based on campaign performance showing high costs and low ROI. However, the shift in power is still maintaining power dependency in the partnership. For the partnerships to move towards value co-creation, a more collaborative partnership must be formed. Algorithmic transparency can aid in providing a campaign performance steering mechanism to allow a mutual beneficial situation where performance can be predicted and managed beforehand.

Recommendations are to further explore the requirements for such a mechanism to design this steering tool, suitable for different types of fashion merchants.

## Table of definitions

<b>Term</b>	<b>Definition</b>
Affiliate marketing	A type of online marketing where advertisers reward their partners for generating sales or leads
Fashion Recommendation System	An online platform where fashion products are recommended to consumers
Algorithmic transparency	Transparency or openness of the working and rules of an algorithm
Publisher	A platform placing advertisements
Merchant	A retailer advertising their products
Affiliate network	A platform that facilitates affiliate marketing, by connecting publishers and merchants
Triad	The partnership between publisher, merchant, and affiliate network
Campaign	An advertisement partnership
Campaign performance	The performance of an advertisement partnership
Vulnerability issues	Occurrences that put an actor at risk of high campaign costs or termination of the partnership
Commission model	An agreement of the action that triggers a commission

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# 1. Introduction

## 1.1. Background

Online fashion retail is still a growing industry. In 2018 Meena (2018) forecasted the global annual revenue to be \$765 billion USD by the year 2022. They also expected global online sales to grow up to 36% of the total fashion retail sales by that time. This forecast was done before the global COVID-19 pandemic occurred. After large parts of the world were confronted with lockdowns, and therefore closed stores, the online share of retail sales turned out even higher than previously forecasted. E-commerce has grown with 30% in 2020, significantly outpacing previous years (Berthiaume, 2021).

Clothing preferences are dependent on more than pricing. As Gaudenzi et al. (2021) suggest, the customer's perception of value in the fashion industry is ambiguous. This means the customer does not determine the value of a product mainly based on objective parameters as pricing. Season, culture, demographics, age, gender, and individual preferences are examples of influencing factors (Chakraborty et al., 2021). To be able to recommend their fashion items to consumers, merchants use Fashion Recommendation Systems (FRSs) (Chen et al., 2019).

Recommendation Systems and Comparison Platforms are quite prolific on the internet. They provide information and advice to consumers to make an informed decision on items to purchase. These systems exist for many product types and have developed into more sophisticated algorithms over time. Recommendation Systems help the consumer find the best product, and also help the merchant to target potential customers with products that they are likely to purchase (Budzinski, 2020). This statement might be a bit rose-coloured, since the main goal is perhaps not specifically to help the consumer find the best product, but to find the product(s) they are most likely to buy or click on. While large scale fashion merchants invest in a Fashion Recommendation System on their own platform, many merchants are also relying on third-party FRS-publishers. Many platforms have emerged that provide recommendations to a large public and bring together products of many merchants in one place. The size of these platforms, such as Kleding.nl or Shopalike, has made them valuable assets in the marketing strategy of merchants.

Partnerships between merchants and FRS-publishers are based on the FRS-publisher listing the merchant's products on their platform. The FRS-publisher receives a commission from the merchant when it forwards a (potential) customer to the merchant's online store. This is known as affiliate marketing. Affiliate marketing has gained popularity over the last decade and a half as a customer acquisition program and is expected to continue growing extensively in the next decade. Its main use is to enable merchants to advertise their products online to their targeted demographic audience in exchange for a commission to the publishing platform. The size of the affiliate marketing ecosystem, expected \$13 billion globally in 2022 (Geysler, 2022), has made affiliate marketing one of the most cost-effective ways of applying multichannel marketing strategies. From the merchant's perspective it is a great way to cut advertising costs, ensure product visibility and Return on Investment (ROI) (Patrick & Hee, 2019).

In line with marketing scholars (Edelman & Brandi, 2015; Gregori et al., 2013; Patrick & Hee, 2019), the advertising platform is referred to as a 'publisher'. The advertiser marketing their products/services through these platforms is referred to as a 'merchant'. Besides those two, another major player in this industry is the 'affiliate network'. An affiliate network is often used to connect merchants to publishers and to provide the technology to track the performance of their collaboration campaigns.

This triad of publishers, merchants and affiliate networks, suffers from vulnerability issues. Affiliate networks tend to be a 'black box' for data. Publishers and merchants can work together without any involvement of a third-party network. However, these one-to-one collaborations are difficult to obtain and maintain. There are signs of dependency between FRS publishers and fashion merchants. Nevertheless, the partnerships are easily terminated. While more and more communication in these partnerships occurs via systems, there is often no exit conversation between the two partners and reasons for cancellation remain unclear. A study amongst affiliate networks have specified 'trust violations' as a main reason for determination of affiliate partnerships (Fox & Wareham, 2007). According to them, sudden cancellations of partnerships are quite common.

One of the main drivers of campaign performance, is the algorithm of the FRS. The algorithm is responsible for recommending the right items to the right consumer. Algorithms are considered complex technology, and a lack of transparency and understanding could make algorithms unpredictable factors for merchants.

## 1.2. Aim, scope, and motivation

The underlying assumption is that algorithmic transparency is not widely adopted in the affiliate marketing industry. Literature has suggested algorithmic transparency as a contributing factor to building trust in interorganisational relationships (Gregori et al., 2013; Kizilcec, 2016; Schmidt et al., 2020). However, there are doubts if this could really solve vulnerability issues (Kaplan, 2020). Currently there is no clarity on the appliance of algorithmic transparency in the affiliate marketing industry and the results regarding vulnerability issues. Meanwhile, engaging in affiliate marketing is a necessity for many merchants who are pushed to online retail more and more. The affiliate marketing 'playground' is not equal for all players when dealing with recommendation systems, as interests can be misaligned and exploited (Duch-Brown, 2017).

A study specified to affiliate marketing partnerships in the fashion industry, in relation to algorithmic transparency has, to date, not been published. Providing more insights through a literature review and empirical data, is a contribution to fill that gap in scientific literature.

This study aims to bring clarity to the topic of algorithmic transparency contributing to solve vulnerability issues in affiliate marketing partnerships, specified to the case of business partnerships between FRS publishers and fashion merchants. Since affiliate networks are a major factor in this partnership, these networks are also in scope of the research.

For FRS publishers and fashion merchants, this study provides more clarity in the algorithmic transparency solutions when applied to their industry. This could benefit their partnerships. The outcomes of this exploratory study clarify further if vulnerability issues could be solved with algorithmic transparency.

### 1.3. Research objective and questions

The objective of this research is to explore the proposed solution of algorithmic transparency in the affiliate marketing industry. Mainly via empirical data, this research explores how algorithmic transparency can have a positive influence on vulnerability issues. Insight was gained into the shape and form of algorithmic transparency in affiliate marketing and as to the reasons why it has not been broadly adopted by publishers of recommendation systems yet. Therefore, the main research question is:

**How may algorithmic transparency play a role in affiliate marketing partnerships, between FRS-publishers and fashion merchants?**

Two sub-questions will provide the structure to answer the main research question.

**SQ 1: What are the current vulnerability issues in affiliate marketing partnerships?**

**SQ 2: What mechanisms should be put in place to overcome observed vulnerability issues?**

To answer these questions, this research was applied to a case study of an FRS and its partnerships with fashion merchants and affiliate networks.

### 1.4. Main lines of approach

The research starts with a review of current literature on the topic and subtopics in chapter 2. This provides a deeper understanding of the topics and insight into the issues already identified. The review ends with an evaluation of the current knowledge and the gaps in literature that were researched. Following the literature review, the methods of the empirical research are explained in chapter 3. There is a description of what data was needed for the objective of the study, and an explanation of how this was gathered. The chapter ends with a reflection on validity, reliability, and ethical aspects. In chapter 4, the findings of the empirical research are described, which lead to a discussion in chapter 5. In that final chapter, the research questions are answered. Followed by an overview of limitations, and recommendations for future research.

## 2. Literature review

This section provides the literature review, starting with a description of the planned approach and how this was implemented. This is followed by a section discussing the results of this review. It will also highlight the conclusions and how this answers the research questions. The chapter ends with a view on any gaps that remain after the literature review and will be the focus of the empirical research.

### 2.1. Research approach

For this literature review a systematic approach was taken. This entails a pre-planned strategy to locate, evaluate, analyse, and synthesise current literature on the topic (Saunders et al., 2019). The decision for using this approach was made because it focuses on a thorough recording of the structure and methods used. Since an empirical study tends to be difficult to generalize, this approach should ensure validity.

One of the aims of this literature review is to determine what has already been written about this research topic. To be more specific, we want to know what current literature says about the role of algorithmic transparency in affiliate marketing partnerships between fashion merchants and FRS publishers and its effect on vulnerability issues between them. For this topic in particular, there are no studies found at this point. However, when we look at the subjects within, there are studies on 'digital platform ecosystems', '(fashion) recommendation systems and algorithms', and 'affiliate marketing and (algorithmic) transparency'.

These subjects have brought forth several terms. The terms are defined and linked using Boolean logic (Saunders et al., 2019). This resulted in search strings that were used in several databases. Using Google Scholar and the Open University library multiple queries are searched amongst peer-reviewed scientific articles. This search and review are limited to literature in the English language, focusing on literature since 2018. Other parameters were not defined at this point to keep the search broad. Literature studies from other business sectors, or geographical areas could still provide valuable information for this study. However, when reviewing the individual studies, these factors are considered as well as the publication period. Table 1 contains an overview of the queries used in the initial search in Google Scholar and the number of hits this generated in random order.

*Table 1: Search queries for initial literature search and number of hits in Google Scholar*

Search queries	hits	Search queries	hits
"algorithmic transparency" AND "platform ecosystem"	2	"algorithmic transparency" AND "recommendation systems"	16
"algorithmic transparency" AND "affiliate marketing"	1	"fashion retail" AND "e-commerce" AND "affiliate marketing"	4
"affiliate marketing" AND partnership	48	"affiliate marketing" AND partnership AND problem	20
"affiliate partnerships" AND transparency	1		

The search hits were reviewed by title and, if they were found to be in scope of the research, the abstract was read. If a paper was still found to be in scope, it was added to an overview of articles to review. 55 articles were added to this table. The selected articles are evaluated based on relevance, value, and sufficiency using a quality checklist derived from Saunders et al. (2019, p. 106). The checklist is added in Appendix 1.

## 2.2. Implementation

To assess scientific articles on relevancy for this research, the titles of the articles were scanned after every query-search. If the title indicated a relation to the subject, the abstract was read. If the paper still seemed relevant, the conclusion was read as well. At this point the decision was made to include or exclude the paper. Papers that were included were added to a table, containing: author(s), year of publication, and title.

The 55 titles that made the table were read and the main findings, relevance to this research, and research method were added to the table. Based on reviewed papers, themes were identified. At this point, a column was added showing the theme or multiple themes of each paper. This resulted in the core literature, which revolves around four themes.

New search queries were added to find scientific literature relating the themes to each other, and the same cycle was applied. From reading and analysing the collected literature, the *snowballing technique* (Saunders et al., 2019) was used to identify additional papers. The themes this literature review focuses on are listed in Table 2 and the related core literature is added as well.

Table 2: Key themes and literature references

Key themes of algorithmic transparency in affiliate marketing partnerships, with literature references	
Theme	Literature reference
Vulnerability issues in digital <b>platform ecosystems</b>	Chang (2020); Cutolo and Kenney (2021); Heimburg and Wiesche (2022)
Vulnerabilities in <b>affiliate marketing partnerships</b>	Amarasekara and Mathrani (2016); Chachra et al. (2015); Edelman and Brandi (2015); Patrick and Hee (2019)
Algorithmic <b>transparency</b> solutions to improve partnerships	Ananny and Crawford (2016); Coglianesi and Lehr (2019); Gregori et al. (2013); Kaplan (2020); Kizilcec (2016); Schmidt et al. (2020)
Transparency in <b>(fashion) recommendation systems</b>	Chakraborty et al. (2021); Duan (2014); Zhang and Chen (2018)

In the end, a total of 16 papers were reviewed to gain insights on this topic.

## 2.3. Results and conclusions

In this section the results of the reviewed literature are discussed. At the end a conclusion will summarise the learning of this review.

### 2.3.1. Affiliate marketing commission models and technology

In affiliate marketing, there are several structures for rewarding the publisher. While most sources make a clear distinction between affiliate marketing, search engine advertising, and display advertising, there is some overlap within the commission models (Edelman & Brandi, 2015; Kapoor et al., 2016; Vulkan et al., 2013). For affiliate marketing, the scope of this study, the main commission model is cost-per-sale (CPS) (Edelman & Brandi, 2015). Cost-per-click (CPC) is mostly associated with search advertising (Kapoor et al., 2016) and in display advertising the most common commission models are cost-per-listing (CPL) or cost-per-mille (CPM) (Vulkan et al., 2013). While these models are commonly associated with different advertising types, Gregori et al. (2013) state

that all of these models can be applied in affiliate marketing. Table 3 provides a breakdown of these commission models.

Table 3: Main commission models in affiliate marketing (Edelman & Brandi, 2015; Kapoor et al., 2016; Vulkan et al., 2013)

Commission model	Type of commission	Action that triggers the transaction between merchant and publisher
Cost-per-sale (CPS)	An agreed percentage of the sales amount, per sale	When a sale is made on the merchant's website that originated from an affiliated link on the publisher's platform
Cost-per-click (CPC)	An agreed or bid amount, per click-through	When a website visitor uses an affiliated link on the publisher's platform to click-through to the merchant website
Cost-per-listing (CPL)	A fixed fee, per listing	Placement of the advertisement
Cost-per-mille (CPM)	An agreed amount, per thousand impressions	When a webpage, featuring the advertisement, is viewed by a website visitor

The different commission models pose potential risks in affiliate partnerships, since these models could cause a misalignment in interest between publisher and merchant (Gregori et al., 2013). For example, when applying the CPS model, a fashion merchant could receive a lot of traffic free of charge if there are no (or few) purchases tracked back to the publisher. On the other hand, when applying the CPC model, the publisher could push a lot of low-quality traffic, which could result in high costs and no (or few) purchases for the fashion merchant. The partners must rely on each other's intentions to put their partnership's needs before their own. Depending on the commission model, the role of trustor and trustee would vary.

Technology is an important factor in affiliate marketing. A brief description of the main components should provide the necessary background to comprehend the affiliate marketing landscape regarding this thesis. This is broken down into four steps (Chachra et al., 2015).

1. Merchant provides one or multiple links to publisher with encoded identifiers. The link directs the publisher's website visitor to the preferred page on the merchant's website. The publisher places the links in the corresponding advertisement.
2. Encoded identifiers in the affiliated links are left in the visitor's browser as a *cookie*.
3. The *cookie* carries the identification of the publisher to the merchant when a sale is made. Which could be immediately or a number of days after clicking on the link.
4. This tracked information enables the merchant to assign a sale to the correct publisher and pay them the commission accordingly.

The *cookie* usually has a lifetime span of 30 days, or however long is agreed between merchant and publisher. If a sale is completed within this period after clicking on the link, the merchant will grant the commission to the publisher. Merchant and publisher can agree on many different variables in their terms, such as the *cookie lifetime span*, the position of the publisher in the sales funnel (if the consumer clicked on multiple publisher's advertisements before buying), the commission rate, and many more. The complexity of these agreements, and the required technology to measure all these parameters, is often the reason why affiliate programs are managed by a (third-party) network.

### 2.3.2. Ideology and vulnerabilities in platform ecosystems

Platform ecosystems with mutual benefits, value co-creation, and cooperation are at the core of the platform ideology, according to Chang (2020); Heimburg and Wiesche (2022). In contrast to this ideology, researchers signal power, control, and dependency as factors in these ecosystems (Cutolo & Kenney, 2021; Heimburg & Wiesche, 2022). As a platform grows, it establishes a position of dominance, known as 'lock-in' (Cutolo & Kenney, 2021). At this point, the platform contains such a large volume of products it draws in both consumers and advertisers, while simultaneously eliminating competitors. Merchants find themselves in a position of dependence, having no choice but to join the platform to reach consumers. Even though most platforms are nowhere near as large as Google or Amazon, within their own markets a similar power imbalance can occur.

The main platform in this thesis is the platform of the FRS. In this context, the FRS publisher is the platform owner, and the fashion merchants are the complementors (Heimburg & Wiesche, 2022). This indicates a relationship of value co-creation, as well as dependency, between these actors. The created value is found in the merchant's products complementing the publisher's platform, resulting in a platform relevant to the publisher and merchant's audience. Despite the fact that ecosystems thrive on this power dependence, the imbalance in power also has consequences (Cutolo & Kenney, 2021).

The relevant content on the platform needs to be curated, therefore complete openness of the platform poses a risk to exploitation from non-suitable merchants (Heimburg & Wiesche, 2022). Platform owners guard the objectives of their platform by enforcing boundaries. Meaning that complementors are subject to these rules if they intent to join the platform. This suggests control in the hands of the publisher, and power imbalance in the ecosystem. The partnerships between owner and complementor are vulnerable, since they rely on a lack of alternatives for the merchant (Cutolo & Kenney, 2021). However, in their findings, Heimburg and Wiesche (2022) indicate that these roles of power dependence are instable. Control can shift from owner to complementor, and back.

### 2.3.3. Vulnerabilities in affiliate marketing

Edelman and Brandi (2015) have researched risks of affiliate marketing, mainly from the perspective of the merchant. In their study they consider only the CPS commission model, as described in section 2.3.1, as affiliate marketing. The identified risks of affiliate marketing relate directly to vulnerability issues in affiliate partnerships. This affiliate marketing model was celebrated upon its introduction ca. 2005, as to align the incentives of merchant and publisher. It was supposed to reduce the vulnerability of the merchant, since they pay only if (and after) a sale was made. This was in contrast with more traditional marketing models, in which the merchant pays upfront, regardless of performance. Within affiliate marketing, this relates most to the CPL model. This model poses a significant higher risk for the merchant, compared to the publisher. The affiliate model, based on CPS, was supposed to restore balance in online marketing.

However, in their study Edelman and Brandi (2015) have identified four types of fraud, applicable to the CPS model. The four types of fraud are *adware*, *cookie-stuffing*, *typo squatting* and *loyalty software*. These practices pose a risk of increased commission costs for the merchant. They conclude that the CPS model poses a greater risk of high costs to merchants than previously thought. In the same year, a study by Chachra et al. (2015) concludes after a two-month user study that *cookie-stuffing* rarely occurs anymore. And while they do not deny the reality of the problem, they do question the prevalence of it. There is a lack of consensus in what practices are considered fraud. Where some affiliate networks clearly list certain actions as prohibited, others simply condone the

same actions. The line between legitimate and fraudulent practice is quite blurry in the affiliate marketing industry (Chachra et al., 2015). Publishers, merchants, and networks are prone to use this to their advantage. It seems that every party has its mechanisms to avoid being the vulnerable party and maximize their revenue.

The different commission models in affiliate marketing have originated from attempts to align interests in partnerships. However, they all expose different vulnerabilities. Merchants collaborating with third-party recommendation systems indicate that partnership trust is impacted by customer data security and time delay when they wish to change recommendation rules (Duan, 2014). The rise of affiliate marketing and platform ecosystems have replaced the need for a relationship between publisher and merchant to a certain extent. Publishers and merchant can simply connect through an affiliate network and start collaborating without ever communicating. Unfortunately, it has not eliminated vulnerabilities, even though they have taken a different shape. The conflict of interest is a recurring theme in the affiliate marketing industry. The many ways to exploit and hide this conflict of interest, are a major contributor to vulnerability issues. The expectation of violation reduces trust overall (Kizilcec, 2016).

#### 2.3.4. Algorithmic transparency in IT systems

Providing transparency regarding the characteristics of the algorithm has been explored as a measure for trust issues in multiple sectors (Lambrecht & Tucker, 2021; Watson & Nations, 2019). Gregori et al. (2013) state that there is a causal relation between a lack of transparency from affiliate networks and a lack of trust between merchant and publisher. Transparency is suggested as a solution. In their research they used questionnaires and focus groups from the tourism industry. This has led to the conclusion that providing the right amount of website background information, leads to increased trust between merchant and publisher. It seems rather optimistic to assume that these parties are willing to provide this transparency. As we know now, opaqueness has been a driver for this industry. The platform ecosystem thrives on power dependency (Cutolo & Kenney, 2021).

Coglianesse and Lehr (2019) describe two types of transparency when it comes to algorithms, in their study on transparency and algorithmic governance. They have used types that correspond to types of transparency defined by the United States government. The first type is *fishbowl transparency*, which provides public access to the information that enters the algorithm. This does not necessarily mean that the public also has access to what happens 'inside' the algorithm. Second, there is *reasoned transparency*. This type provides an explanation to decisions made by the algorithm. It is considered quite challenging to provide reasoning, because of the 'black-box-nature' of algorithms. In this case it is not required to disclose the information that enters the algorithm. The amount of transparent information should be quite specific as well. Showing procedural information builds trust, however, additional information about outcomes fosters the expectation of trust violations (Kizilcec, 2016). Both types of transparency have pros and cons and seem more theoretical than actually applicable in real life. Kaplan (2020) states that transparency in data and algorithms may have many benefits, but it is also not a quick fix. Her observations are based on a study on algorithmic transparency in health systems. Regarding algorithmic transparency, the obstacles for establishing transparency are:

- Complexity: algorithms are difficult to understand, making sure they function properly is almost impossible. This applies to Coglianese and Lehr (2019)'s *reasoned transparency*.
- Training: algorithms that are 'human-trained' are not guaranteed in quality of training and/or trainers

- Underlying data: difficult to assess. This applies to Coglianese and Lehr (2019)'s *fishbowl transparency*.
- Ethical considerations

Ananny and Crawford (2016) suggested that transparency does not necessarily build trust. This is known as the transparency paradox, where the more openness is provided, the more questions or suspicions it causes. This reconfirms the limitations algorithmic transparency can have. It also raises questions if these limitations would apply to recommendation systems as well, and if these perceptions have an impact on vulnerability issues in affiliate marketing partnerships.

### 2.3.5. Recommendation System algorithms

When scholars refer to algorithmic transparency in recommendation systems the type of transparency corresponds to *reasoned transparency*, where explanations for the recommendation are provided to the user instead of revealing the algorithm's underlying data (Chakraborty et al., 2021; Duan, 2014; Zhang & Chen, 2018).

Zhang and Chen (2018) have created a model for 'Explainable Recommendation', which provides users with an explanation of why a product is recommended to them. This again relates to the transparency type *reasoned transparency* by Coglianese and Lehr (2019). The explanation is aimed at the consumer, to help them make informed decisions as well as to persuade them into purchasing products. For e-commerce businesses the latter also means increased commercial profits. There is no take on this type of transparency towards the (fashion) merchant, while this could be relevant information for them as well. This could be a way of providing transparency to decrease vulnerabilities in the partnership.

Chakraborty et al. (2021) have reviewed Fashion Recommendation Systems specifically, zooming in on their filtering techniques. They define FRS as "*a means of feature matching between fashion products and users or consumers under specific matching criteria*" (Chakraborty et al., 2021, p. 7). They classify FRSs in one of five types, which are described in Appendix 2. The case organisation for this thesis works with a Knowledge-Based system, and this will be the type of FRS this thesis focuses on. It might be considered the most basic type of FRS, since the others are more sophisticated and require more input data. Appendix 2 also contains a short sum-up of the most commonly used algorithmic models and Recommendation Filtering Techniques, based on the study by Chakraborty et al. (2021). Their study contains an analysis on strengths and weaknesses of these techniques and proposes alternative algorithmic models for FRSs. The relatively compact overview their paper provides gives a clear insight of what transparency might reveal.

Due to the extensive technical and mathematical nature of algorithmic models, earlier discussed statements of Kaplan (2020) are supported. Mainly her concerns of algorithms being too complex to provide transparency on make sense in light of Chakraborty et al. (2021)'s study. Depending on their size, some merchants have recommendation systems of their own. In that case, merchants might have the knowledge in-house to comprehend algorithms. However, it is more likely that merchants have outsourced this and do not have machine learning experts on their own online marketing team. One could assume that transparency of the algorithmic models does not benefit the merchants in any useful way. Therefore, algorithmic transparency would not impact vulnerability issues in a positive manner.

Stakeholder’s trust regarding transparency depends on what information is visible and the clarity, accuracy, and relevancy they perceive. The information that can be provided by algorithmic transparency might not match these criteria, and therefore not improve vulnerabilities (Schmidt et al., 2020). The question if explanations (or *reasoned transparency* (Coglianese & Lehr, 2019)) actually improve vulnerability issues remains to be studied.

### 2.3.6. Conclusions

Circling back to the main research objective, this literature review has clarified several things regarding the research questions. Table 4 and Table 5 show the conclusions drawn from the literature, and their relevancy for this study. In addition, the third column identifies the themes which are used to analyse the empirical data.

#### SQ 1: What are the current vulnerability issues in affiliate marketing partnerships?

Table 4: Conclusions, relevance, and themes for research question 1

Conclusions	Relevance for this empirical study	Themes to focus on
There is a power imbalance in platform-based partnerships.	To confirm or deny this in the context of affiliate marketing	Relations of power
Power dependency is a driver behind platform-based partnerships.	To explore the reliance on power dependency from different stakeholders’ perspective in affiliate marketing	Relations of power
In the context of this study the FRS would theoretically be considered the platform owner, thus the dominant party in the partnership.	To confirm or deny this in the context of affiliate marketing from different stakeholders’ perspective	Relations of power
Vulnerability issues are quite common in affiliate marketing partnerships.	To explore the reasons behind these vulnerability issues	Prevalence of vulnerability issues
Besides fraud, there are several practices in affiliate marketing that are legal but are still vulnerabilities between publishers and merchants.	To describe what practices the stakeholders engage in and which they experience from their partners	Prevalence of vulnerability issues
There are major conflicts of interest that make partnerships in this industry vulnerable.	To explore conflicts of interest from different stakeholders’ perspective	Prevalence of vulnerability issues

#### SQ 2: What mechanisms should be put in place to overcome the observed vulnerability issues?

Table 5: Conclusions, relevance, and themes for research question 2

Conclusions	Relevance for this empirical study	Themes to focus on
There are many types of FRS algorithmic models. Knowledge-Based is the most basic type.	To determine what the level of comprehension of algorithms is of merchants	Complexity of algorithms
Algorithms are incredibly complex, and it requires extensive technical knowledge to fully comprehend them.	To determine what the level of comprehension of algorithms is of merchants	Complexity of algorithms

Ensuring transparency is not easy and might not be realistic.	To explore what transparency stakeholders want to receive	Limitations of transparency
All parties have their reasons to not provide transparency	To explore what transparency stakeholders are willing to provide	Limitations of transparency

## 2.4. Objective of the follow-up research

Now that there is more clarity on what answers current literature has brought forth, the focus shifts to how the gaps in the literature can be filled. Since the current literature has not been able to answer all questions within the context of this study, the empirical research focuses on filling these gaps.

At this point, there have been studies done on algorithmic transparency of recommendation systems as a measure to increase trust towards consumers. There are multiple models for explainable recommendation, to create reasoned transparency. However, there is lack of a study that puts this in the context of the affiliate marketing partnership, who are exposed to multiple vulnerabilities in the partnership. The objective of this thesis is to fill that gap by exploring if and how algorithmic transparency can contribute to solving vulnerability issues between merchant and publisher. The question that remains is if algorithmic transparency is actually what merchants and publishers want and need. Would they perceive this as a solution? Are they willing to provide transparency? If not, what are the limitations?

The type of information that is required to answer these questions is mainly the insights from the merchants, publishers, and affiliate networks. Do they support the conclusions drawn from the literature? Are there circumstances that the literature does not consider?

One of the main gaps is the scope of the reviewed literature. None of the empirical studies matches the context of this case study exactly, as in the studied business sector in relation to this topic.

## 3. Methodology

In this section, substantiation is provided for the empirical research. First, the conceptual design of the research is described. After that, the case study background is provided. This is followed by a section that explains the used data analysis methods, and finally there is a section describing the validity, reliability, and ethical approach of this research.

### 3.1. Conceptual design

The main approach for the empirical research is described in this section. This includes arguments for the selected method, based on an evaluation of advantages and disadvantages of these choices.

#### 3.1.1. Objective of empirical research

The literature has provided some insight in the topic and has also clarified some of the research questions to a certain extent. However, there were still some gaps in the literature. There is some clarity, based on empirical studies, on the transparency that the trustor would like to receive. What was lacking is insight on what extent the trustee is willing to provide this and what the current obstacles are. The objective of this part of the research was to gain insight on the stakeholder's views on algorithmic transparency to improve vulnerability issues in affiliate marketing partnerships.

#### 3.1.2. Required information

The 'blind spot' of the literature exists mainly because of a lack of empirical data, particularly within the context of this study. The context of this research is specifically the partnership triad between fashion merchants, FRS publishers, and affiliate networks. To gain more insight on the subject in this context and in relation to the reviewed literature, it required the points of view of all three parties. This involved mainly motivation and attitudes towards the partnerships, indicating a qualitative approach (Saunders et al., 2019). The aim was to draw a comparative explanation between theory and empiricism.

This information was acquired by gathering experiences and opinions of fashion merchants, FRS publishers, and affiliate networks on the research topic. These experiences and opinions were on an organisational level, corresponding to the partnerships. Employees of these organisations, involved in these partnerships, have expressed their experiences and opinions.

#### 3.1.3. Capable methods

The main method of gathering information about attitudes and motivation is qualitative research (Saunders et al., 2019). This method provided the ability to get in-depth answers by conducting interviews. This could be done in writing, over the phone, video call, or in person. Naturally, an interview in person provides more context since the interviewer can observe body language. This benefit is slightly less over video call, and not visible at all over the phone. An interview in writing also lacks the perception of the participant's tone of voice. The risk of misinterpretation is much larger for the latter method. Interviews in person or video call were therefore conducted. Qualitative research was very suitable for an explorative study (Saunders et al., 2019). A downside was that it was more time consuming than a quantitative study. On the other hand, a lot more data could be gathered with a smaller population than with a quantitative study.

Quantitative research was considered as an alternative method to gather opinions from stakeholders. This method is suitable to gain large amounts of structured data. The risk of misinterpretation is smaller than when using a qualitative method, assuming the survey is

formulated correctly. Besides that, a survey is the preferred method when the study requires a certain measurement of data (Saunders et al., 2019). However, this method would require access to a large population to draw representable results from the data.

#### 3.1.4. Selected method

Since the objective of this study was to clarify our understanding of a social-technical issue, problem, or phenomenon whereby humans were an integral case that needed investigating in this study, the best research method for this study was qualitative. Because the investigated phenomena were new and the researcher was interested in rich data related to vulnerability issues that impact partnerships between multiple parties, this study could be labelled as an exploratory study (Saunders et al., 2019). According to Saunders et al. (2019) this type of study requires open-ended questions by conducting (expert) interviews. A quantitative study would have been less suitable, and less feasible due to the lack of access to a large population that meets the requirements.

When conducting a qualitative study, a single embedded case study seemed the strongest method for this research's purpose. With this method we were able to zoom in on a single FRS publisher, and thus a single ecosystem. This still provided the opportunity to examine multiple affiliate marketing partnerships, since the FRS publisher was collaborating with multiple fashion merchants. It contained the study to the same context, which minimized the risk of misinterpretation.

With this decision we also considered the practical limitations of time and resources during this study. A single case study was realistic, as supposed to a multi case study. Since all participants were selected in relation to this case organisation, the opportunities for the researcher to identify and approach interviewees were feasible as well. Most of the potential interviewees were part of the researcher's professional network. The study was cross-sectional, as supposed to longitudinal, given the exploratory nature of the study and time constraints. While this was best suited for the study, readers should keep in mind that the results of the study are a snapshot of that particular time.

Besides interviews, observations and document analysis are also valuable methods to gather data. Observing partnership meetings, the platforms of the publisher and networks, and document analysis on contractual agreements could provide interesting information. However, it would reflect the opinions of the organisation representatives in a lesser matter. It could also 'cloud' the researcher's objectiveness and interpretation of interviews. Because of these reasons and limited access, due to privacy concerns, these sources were not included in this research.

### 3.2. Case study background

This section will provide the background of the case study, including an explanation of the selected participants. The main stakeholder in this study is the FRS publisher. The FRS publisher selected for this study is one of the leading Fashion Recommendation Systems for women's fashion in the Netherlands. It was founded in 2011. It has worked with several affiliate networks and hundreds of fashion merchants over time. This FRS publisher is part of a large media organisation and runs most of its operations in-house. This publisher works with a Knowledge-Based algorithm.

Several (former) employees of the FRS publisher were interviewed. This included the Brand Manager, responsible for the business side of the FRS, the Product Owner, who is responsible for the recommendation system itself, and an Account Manager, who is managing the relationship with merchants and affiliate networks. In addition to the FRS employees, an account manager (or equivalent) of an affiliate network was interviewed.

The fashion merchants are the other side of these interorganizational relationships. Several fashion merchants were selected for interviews. To ensure a diverse selection of fashion merchants, the criteria as shown in Table 6 were drafted. The selected merchant could fall into either category A or category B for each criterium. The final selection contains two merchants that qualify into every category at least once.

Table 6: Criteria for selection of participating fashion merchants.

Criterion	Category A		Category B
1	Currently work with the selected FRS publisher	<b>OR</b>	Have worked with the selected FRS publisher in the past
2	Online store only		Online and brick store
3	Fashion store only		Multiple product categories

The selected merchants were A and B. Merchant A had (1) worked with the publisher in the past, (2) has only an online store, and (3) sells only fashion products. Merchant B (1) currently works with the publisher, (2) also has brick stores, and (3) sells multiple product categories.

Since the marketeers, or equivalent job functions, at the fashion merchants are usually the most involved with affiliate partnerships and their performance, they were invited to partake in the interviews to represent the merchants.

The final selection of participants is listed in Table 7.

Table 7: Selected participants.

Participant	Job title	Organisation
A	Brand Manager [FRS X]	FRS [X]
B	Account Manager	FRS [X]
C	Senior Product Owner	FRS [X]
D	Publisher Development Manager	Affiliate Network [Y]
E	Senior Online Marketeer	Merchant [A]
F	SEA Specialist	Merchant [B]

Interviews were semi-structured, varying from twenty minutes to an hour, starting from a similar set-up of questions. This set-up can be found in Appendix 2

### Types of Fashion Recommendation Systems (Chakraborty et al., 2021)

1. Fashion Image Retrieval System  
Based on correlation analysis of feature similarity and individual data.
2. Personal Wardrobe Recommendation System  
Based on wardrobe usage history and matching to similar styles.
3. Knowledge-Based Recommendation System  
Also known as fashion pairing recommendation system or fashion coordination system. Based on styling knowledge and matching types of clothing items.
4. Smart or Intelligent Recommendation System  
Based on features of clothing and user, such as body type or contextual information.

## 5. Social-Network-Based Recommendation System

Based on social media information discovery and social collaborations.

### **Algorithmic models and Recommendation Filtering Techniques (Chakraborty et al., 2021)**

The most used algorithmic models are multilayer perceptron (MLP), recurrent neural network (RNN), k-nearest neighbour (kNN), convolutional neural networks (CNN), Bayesian networks, generative adversarial network (GAN) and autoencoder (AE). Besides algorithmic models, FRSs could use other methods, such as Recommendation Filtering Techniques. The most common are content-based filtering (CBF), collaborative filtering (CF), hybrid filtering (HF), and hyperpersonalization filtering.

Appendix .

### 3.3. Data analysis

As mentioned by Saunders et al. (2019), qualitative research can be quite interpretive. This means that the interpretation of the researcher is applied to make sense of the subjective expressions. Being aware of this, the approach to analysing the data is set up in a manner that minimizes the risk of misinterpretation.

As soon as data is gathered, the first phase of analysis takes place. After each interview, the recording is transcribed. Following these steps after every interview provides direction for the next interviews. These are adjusted beforehand accordingly, to get more data around a certain theme. Also, by processing the interviews immediately the risk of misinterpretation is limited to a minimum.

The themes are coded, inspired by the Grounded Theory method as described by Saunders et al. (2019). The codes are based on the themes identified in paragraph 2.3.6. For analysis and coding the Atlas.ti software is used. This tool supports structuring large amounts of qualitative data. An overview of the codes used for analysis can be found in Appendix 2.

### 3.4. Validity, reliability, and ethical aspects

Research needs to be set up in a sound and prudent manner. To ensure this, this section describes what risks there are for validity, reliability and ethics, and the measures taken to minimize these risks for this thesis.

#### 3.4.1. Construct validity

To ensure construct validity the case study contains interviews with multiple sources. Within the FRS publisher, multiple team members are interviewed. Gathering data from affiliate networks was done by interviewing employees from more than one affiliate network. When gathering data from fashion merchants, a selection of merchants was made by applying certain criteria, to ensure a diversity of sources. The criteria used are listed in Table 6.

Because interviews are transcribed and labelled immediately after conducting them, the opportunity arises to have statements confirmed in following interviews. This creates a chain of evidence (Yin, 2009).

#### 3.4.2. Internal validity

When conducting a study, time does not stand still. There are many factors that could influence the outcomes. In this study there is awareness of possible threats to internal validity. Past or recent events could have changed the perception of a participant (Saunders et al., 2019). A major factor is the COVID-19 pandemic, which resulted (and can result in the future) in several lockdowns in the researched area. Mainly for merchants this means a greater dependence on online retail, which might influence their view on this business. The risk of participants withdrawing from the study (mortality (Saunders et al., 2019)) was controlled by excluding the requirement to be employed by the publisher at the time of the study. Ex-employees were also eligible. For the merchants there is a list of criteria. If a merchant would withdraw, they could be replaced by another that matches the criteria, if the time restraints allowed this. Another factor is the ambiguity about causal direction (Saunders et al., 2019). The literature review has shed some light on this issue, and it seems particularly relevant for this study, since cause and effect are not clearly defined on this topic. Participant's views on this are valuable but should not be interpreted as factual.

### 3.4.3. External validity

Generalization is a concern when it comes to single case studies. This study can be case-to-case transferable to a certain extent, when applied to the same conditions and context. To realise this transferability, the context and conditions are described as detailed as possible within the limits of this research's scope and confidentiality. Despite these efforts, a complete and seamless transferability might not be realistic.

### 3.4.4. Reliability

Since this research used a qualitative method including interviews, the role of the researcher is taken into account. Participants were drawn from the researcher's own professional network. This could have influenced the responses of the participants. Participants are more likely to give socially acceptable answers in interviews (participant bias), especially when they are aware of their relationship to the researcher. In this case the relationships between researcher and participants were not active partnerships. The researcher was not involved in any of the discussed partnerships anymore, and future partnerships unlikely. This weighs in the benefit of the research, resulting in more openness between participants and researcher than if this were active or future partnerships. However, considering the nature of the relationships, the participants might still be influenced by this past association and more aware of the answers they gave. To minimize this influence, the researcher emphasized their independence from the case organisation before any interview was conducted. The anonymity and confidentiality of the interview (recordings) was also repeated at this point.

### 3.4.5. Ethical approach

When approaching research participants, they were informed about the content and purpose of this research and their expected role in it. An informed consent form was reviewed and approved by the participants before conducting an interview. A draft of this form can be found in Appendix . To minimize any risk of harm to participants, any conditions were discussed beforehand. This meant to conduct interviews outside of office hour or virtual. Participants also have the right to remain anonymous and recordings remain confidential. No personal names were included in the research. Participants were not lured into participating under false pretences, and they could withdraw from participation at any time.

## 4. Findings

This chapter will discuss the findings of the empirical research. The research was carried out according to the methods described in the chapter 'Methodology'. Several themes have emerged from analysis of the gathered data. These themes are Positions of Power, Conflict of Interest, Campaign Performance, and Algorithmic Transparency. The findings are presented per theme.

### 4.1. Positions of power in the affiliate marketing triad

To comprehend the dynamic between the main players in affiliate marketing, interviewees were asked to describe the affiliate marketing landscape. This section provides insights into the rationale behind the partnerships and how these relate to each other. When describing the partnership dynamic, power positions and vulnerabilities were mentioned from all three perspectives. The following sections each present the findings of one of those points of view.

#### 4.1.1. The view from the FRS publisher on the triad

Gaining insight about the relationship dynamic in the triad, provides context to the current issues in those partnerships. From the perspective of the FRS publisher, the affiliate network can be left out of the equation. An Account Manager at the FRS-publisher shares that they were instructed by management to avoid working with these third parties, and rather prefer a direct partnership with the merchants. The first reason, according to the publisher, is that this limits the risk of variances in measured traffic.

*[The account management team] were told [by FRS management] to put as many merchants as possible on a direct partnership, instead of a partnership via [an affiliate network], because the network measures about 8-9% less clicks [than the FRS measures]. (PART\_B, Account Manager at FRS [X])*

Second, the publisher says that a direct partnership is beneficial to the merchants as well since it costs less.

*It is cheaper for the merchant to work directly with us because our rate stays the same. If [the merchants] work via an affiliate network they must pay off some more to the network, on top of what they pay us, so it becomes even more costly. And usually, it is an additional fee of 20% towards the network. And then it will be even harder to get a good ROI for that merchant. (PART\_A, Brand Manager at FRS [X])*

A third reason to avoid partnerships via affiliate networks is that the affiliate networks are getting paid by the merchants, which concerns the publisher as to whose interest the network takes more to heart.

*[The affiliate network is] paid by the merchant and not by us [the FRS]. So, chances are real that they side with the merchant more than with us. (PART\_A, Brand Manager at FRS [X])*

The affiliate network confirms the focus is on the merchants since they pay the bills:

*We [the affiliate network] make our own deals with the advertisers because they are the ones paying us. (PART\_D, Publisher Development Manager at Affiliate Network [Y])*

The fourth reason, for wanting to exclude the affiliate networks, is that a manager at the FRS publisher says the affiliate networks are gaining too much power, with them being the middleman for many campaigns. The publisher would rather hold on to this power themselves, by working directly with merchants.

*It is tricky [...] if [the campaign] runs via a network because that is where the power than lies. [The network] approves [sales], [...] decides about transactions, and we have to wait a long time until we actually get paid. [Those three factors] create a big risk for us. (PART\_A, Brand Manager at FRS [X])*

*To be honest, at the moment we have a position of power, because we work according to this [business] model. [...] It's not very appealing to take on a more vulnerable position, even if we are noticing that we are losing clients. (PART\_A, Brand Manager at FRS [X])*

#### 4.1.2. The view from the merchant on the triad

In the previous section the perspective of the publisher came to light. Following in this section, the point of view from the merchant is presented, and (mis)alignment with the publisher's perspective is highlighted. Findings from the interview material show that the decision to exclude the affiliate networks from the campaign collaboration can be cost-related for merchants. A Senior Marketeer at a merchant confirms the earlier statement from the FRS-publisher, but from the merchant's perspective:

*In the past we always worked via an affiliate network but I became too costly. So eventually we decided, because we already had a good relationship with [FRS X], to just exclude the network. [...] Because we pay per click [in this partnership], it became way too expensive with the network in the middle, because you have to pay the network as well. (PART\_F, Senior Online Marketeer at merchant [A])*

However, according to some merchants, working with an affiliate network has many benefits. With respect feelings of convenience and control are mentioned as the first reason to work with an affiliate network.

*A benefit of being in the position [of power] that we are in, is that we do not really have to negotiate conditions anymore. Since we now exclusively work with affiliate networks, we just list our conditions into our profile. When a publisher agrees to work with us, they agree with all those conditions. These are already preset and very clear for them to see. [...] And it's up to [the publishers] if they agree or not, but we do not really negotiate outside of those conditions. Formerly, when we did not have this policy, we did negotiate, and that was also when we worked with [FRS X]. But was just not in our benefit, not in our best interest and it's just a lot easier for us to work this way. (PART\_E, SEA Specialist at merchant [B])*

A second reason mentioned for working with an affiliate network is that the affiliate networks provide technology that makes it easy to measure campaign performance.

*Since we got bigger and bigger, we decided to put it all together in one pile and work with only networks. And we are trying to reduce the number of networks that we work with as well. Just to keep a good overview of where the money goes, what our budgets are and how performances are measured. (PART\_E, SEA Specialist at merchant [B])*

Merchants feel a shift in power towards themselves and are not keen to give that up, which is a third reason to continue partnerships via affiliate networks. An interviewee describes that merchants previously were relying heavily on affiliate marketing to get exposure for their brand, and now they have their own social media channels for that purpose.

*Exposure is still a factor, but it's really not as important as it used to be, since we have our own platforms on social media. (PART\_A, Brand Manager at FRS [X])*

*[Previously,] we did not have the position of power that we have today. And as long as that is the case, I don't see any reason for us to change back. (PART\_A, Brand Manager at FRS [X])*

#### 4.1.3. The view from the affiliate network on the triad

While publisher and merchants say they could run campaigns without an affiliate network, the affiliate network does not agree. They consider themselves essential to the partnerships. A Publisher Development Manager at an affiliate network even says it is impossible for the merchants to navigate partnerships without them:

*It is impossible for [merchants] to go and find the right platforms to advertise their products. And it is impossible for [merchants] to know if [a publisher] is worth their while and if they'll be able to earn their investment back. That's why it is so important what [the affiliate network] does. Technically, we ensure and guarantee quality on both [publisher and merchant] sides. (PART\_D, Publisher Development Manager at affiliate network [Y])*

First, the role of the affiliate network as a connector between merchants to publishers is mentioned. The interviewee explained how the affiliate network guarantees quality. They illustrate an example of assessing the quality of a merchant:

*Quality is extremely important, so we have to do a thorough screening of the products [a merchant] offers. The image quality, the product feed... The feed being complete, the product quantity, and if the features are listed correctly. And that it is updated frequently. (PART\_D, Publisher Development Manager at affiliate network [Y])*

The interviewee also emphasizes the dependency between the triad:

*We are here to ensure that these two parties can find each other and collaborate successfully. We all need each other. Some publishers live solely off the*

*commissions they earn. And at the same time, we earn a commission over that commission. [...] That is our main income. And the advertisers need us as well, so their budget is spent wisely. (PART\_D, Publisher Development Manager at affiliate network [Y])*

Second, the technology provided by affiliate networks is indispensable to a successful partnership between publisher and merchant, according to the affiliate network.

*We have automated a lot of the important aspects. [...] Publishers and merchants are required to deliver a lot of information that results in a clear profile. [...] Every organisation works differently, and every technology is different. Our platform enables publishers to customize [a merchant's product feed] to ensure compatibility with their own technology. [...] Partners can track [campaign] performance in our platform. It is all measured by the tracking our platform adds. [...] That is a lot of incredibly valuable information that we provide insight to, for [merchant and publisher]. (PART\_D, Publisher Development Manager at affiliate network [Y])*

This is also confirmed by a merchant. However, they described the affiliate network's technology as beneficial, not as essential.

*We work closely together with affiliate networks. They have very big networks of publishers, which makes it easy for us to see who we want to work with. And how they are performing. (PART\_E, SEA Specialist at merchant [B])*

Regarding to how the affiliate networks view the publishers, the employee of the affiliate network (PART\_D) says that publishers are valued by the network:

*Publishers are very important to an affiliate network. It is important that they are of high quality if they are affiliated with [the network]. Besides that, we have to help each other to get the most out of a partnership, and to ensure it is profitable and able to continue growing. (PART\_D, Publisher Development Manager at affiliate network [Y])*

## 4.2. Conflicts of interest and the risk of relinquishing control

When asking interviewees about the issues in affiliate marketing partnerships, they often spoke about the risks of the CPC (cost-per-click) and CPS (cost-per-sale) commission models, conflicts of interest, and violations and manipulations of campaign agreements.

### 4.2.1. Reasons for preferring CPC or CPS commission model

Interview findings show that risk mitigation is a major driver behind the decision to opt for the CPC model or the CPS model. Publishers and merchants are both at risk of high campaign costs. The FRS publisher expresses a clear preference for CPC, and there is a clear preference for CPS from the merchants.

*When we work with a merchant directly on CPC, we provide a service, calculate the frequency of that service delivered ourselves, and send out an invoice. [The invoice] holds an obligation to pay, so there is no [external] approval required there. (PART\_A, Brand Manager at FRS [X])*

*CPS means a lot more security for [the merchant]. A lower risk of high costs without it generating higher revenue. (PART\_F, Senior Online Marketeer at merchant [A])*

When asked if they would consider going back to a CPC model, a merchant expressed no doubts:

*Absolutely not. We only did that in the past because we had no choice. Our hand was forced, and we had to agree to the conditions of platforms that we wanted to work with. (PART\_E, SEA Specialist at merchant [B])*

The publisher explained that they can influence the amount of traffic going towards the merchants. Which is an asset to working on the CPC model, according to FRS interviewees. When working with the CPC model, the publisher has the certainty to earn an agreed amount of commission per outbound click, said an interviewee working for the FRS publisher. Interview findings show that this is important to the publisher, since they want to ensure they cover the costs for inbound clicks. Since the publisher usually has costs for inbound clicks as well, the CPC model provides them with the most control. The Brand Manager at the FRS (PART\_A) says that the merchants are not always aware of those costs being made:

*Merchants tend to forget that we also have to buy our traffic, to make sure that it is of high quality. (PART\_A, Brand Manager at FRS [X])*

Empirical data uncovers another reason why publishers prefer the CPC model. Interviewees spoke about not having influence on visitors making a sale, beyond their own platform. So only being rewarded after a sale is unfair in their opinion.

*We find [working exclusively with the CPC model] important because we don't have any influence on what happens to the visitor beyond [sending the visitor to] the webshop. (PART\_A, Brand Manager at FRS [X])*

*We always get paid afterwards. We have already provided the service that we can't take back, and then we have to hope that we get paid for it. That is tricky, on a CPS model. (PART\_A, Brand Manager at FRS [X])*

*We provided our part of the service, so it would be unfair if we would only get paid if the webshop itself has its own things in order. If they decide not to be transparent about shipping costs, or if they have a complex check-out process, then that should not hurt us. (PART\_A, Brand Manager at FRS [X])*

The CPS model has a greater dependency on sales data. This data is considered less reliable by the publisher. An interviewee illustrates this through an example:

*[Traffic] runs through so many channels that it is hard to verify if the data that we receive is still correct. So if [the merchants] say that they have sold 15 pairs of pants, is that true? Or perhaps it was 20 pairs? (PART\_A, Brand Manager at FRS [X])*

However, the merchants consider the CPC model to be risky. They stated to have no control of the amount of traffic sent towards them, still they are charged for every click. The affiliate network also explains this risk of manipulation:

*A publisher could benefit from sending as much traffic as possible as a way to earn as much commission as possible, without it benefitting the merchant. (PART\_D, Publisher Development Manager at affiliate network [Y])*

To gain back control over their expenses, the merchants have moved more towards the CPS model. According to the interviewees, this model limits the risk of sudden high costs for the merchants since they only pay commission if a sale is made. Affiliate networks did not mention being impacted by these risks.

#### 4.2.2. Opting for a win-win partnership

All three parties in the triad have mentioned the conflict of interest as a major factor in the partnership. The current landscape of affiliate marketing offers several types of commission models, where each path offers a clear benefit for one party over the other. The commission models applicable to this case study were CPC (cost-per-click) and CPS (cost-per-sale).

While publishers prefer to work with the CPC model, the affiliate network expressed a contrasting opinion on that commission model:

*One of the two will always be dissatisfied, because they are aiming for different goals. So there is always a loser. We'd rather have more harmony between [publisher and merchant], and that they strive towards the same goals and the same targets. (PART\_D, Publisher Development Manager at affiliate network [Y])*

The network responded that they prefer the commission model CPS since this is in the best interest of the partnership.

*[With CPS] both parties are aiming to maximize sales. [...] Since many [merchants] offer quite high CPS commissions [...], [the CPS model] is a way for publishers to share in the profit of merchants. This creates a win-win situation. These types of partnerships are what we would rather see. To have less friction, so [the partnerships] last longer. (PART\_D, Publisher Development Manager at affiliate network [Y])*

#### 4.3. Significance of campaign performance for merchants

Empirical data from this research shows that performance indicators, such as ROI or conversion ratio, are important to merchants. Performance of marketing campaigns was mentioned, during interviews with merchants, as a prime factor in deciding to continue a partnership with a publisher.

The affiliate network and FRS publisher also recognize the significance of KPI's to the merchants:

*[Merchants] mainly look at performance. At ROI. Are they earning back their investment? The more we can measure and provide insight into [performance], the more important it becomes to them. (PART\_D, Publisher Development Manager at affiliate network [Y])*

*[Measuring performance easily] is just very important to marketers. They get targets from their bosses, and that's what they have to stick to. At the same time that is also a pullback because if targets are not met, terminating the partnership is quickly decided. (PART\_B, Account Manager at FRS[X])*

However, interview results show that the FRS publisher is not all appreciative of the significance the merchants hold to KPI's. Interviewees said that merchants focus on performance too much.

*[Merchants] have become way to short sighted over the past years. They only look at direct profit, but you have to see the bigger picture. [...] If they are on our platform, that has a lot more value than just the products they sell on referral. It is also brand exposure. We had a large number of visitors on our site, and all those visitors see products of the [merchants]. That doesn't cost [the merchants] anything. (PART\_C, Senior Product Owner at FRS [X])*

Merchants nuance this in the interviews, by admitting that they would sometimes continue a partnership, even if the campaign performance is poor. However, giving the publisher the benefit of the doubt, and working towards improvement should start to pay off eventually, according to the merchants. Otherwise, they said, the partnership would indeed be terminated.

*If there's a good and long relationship, we might stretch it a bit longer. And we will see if there is more we can do to optimize performance. But if performances are already showing a downward trend for quite some time... Usually there's nothing else we can do. (PART\_E, Senior Online Marketeer at merchant [A])*

*For [smaller merchants] I get why they would pull the plug [on the partnership] much sooner with poor performance. They don't have the option to wait two years for [the performance] to get better. (PART\_F, SEA Specialist at merchant [B])*

#### 4.4. Significance of algorithmic transparency in affiliate partnerships

Another theme raised during the interviews was the role of algorithmic transparency in the partnerships between publisher and merchant. The Brand Manager at the FRS-publisher (PART\_A) considers their transparency of the algorithm as sufficient. They explain that the current form of algorithmic transparency is to offer explanations to the merchants about factors that influence their algorithm.

*We share [with merchants] how the algorithm works. That popular products go to the top of the listing, products that get a large number of clicks. (PART\_A, Brand Manager at FRS[X])*

*We are already doing a lot to offer transparency. We have a platform where they can log in to see how many clicks they have made in real time. This let's [the merchants] know what the bill will be at the end of the month. This provides a lot of control for the merchants. (PART\_A, Brand Manager at FRS[X])*

Even though these statements were made, interview data also shows that not all FRS employees are confident in the extent of their own comprehension of the algorithm. To be more specific, the employees of the FRS, that are in contact with merchants, confirm that they do not fully comprehend the algorithm themselves. And these employees are assuming that merchants don't have this knowledge either.

*I don't really understand it myself. I don't know anything about types of algorithms, [...] like KNN-models. I also don't think we can assume that a merchant would understand this. [...] The technical knowledge [of the merchant] doesn't go that far. [...] If we were to provide a lot more transparency about that, I would only cause confusion. (PART\_A, Brand Manager at FRS[X])*

Furthermore, the merchants agree on algorithms being too complex for their level of technical knowledge.

*We don't understand how [the algorithm] technically works. Most of us don't get that. So I don't need to know, but on a high level... yes. But I don't know how [the FRS] should explain it to us. (PART\_F, SEA Specialist at merchant [B])*

Interview responses also indicated that the FRS publisher is not certain about what information merchants would find relevant.

*I would love to know what information merchants would wish to receive. [...] What kind of transparency would they want? Essentially, we are already providing this, but apparently it is not the information they are looking for. (PART\_A, Brand Manager at FRS[X])*

Besides a lack of knowledge as to the wishes of the merchants, the empirical data shows proof of a tendency towards opaqueness on the side of the publisher. The Brand Manager at the FRS (PART\_A) anticipates discussions with the merchants, as a result of transparency.

*What we don't want is to have endless discussions about every click, every product, and every little thing. If we provide too much transparency [...] more questions will be asked. [...] [Providing a lot of transparency] implies that you are open to discussion and open to changes. Sometimes that is just not the case. [...] It might hurt the relationship more than it will strengthen it. (PART\_A, Brand Manager at FRS[X])*

According to research data of this study, merchants are more interested in performance indicators than algorithmic transparency. The transparency they seek predominantly concerns performance data. Transparency of the algorithm is deemed less relevant than high performance.

*If the [campaign] performance is good, then we are happy. And if they don't violate any of the conditions, then we can assume that the brand is not hurt as well. So how they do it is really not that important to us. (PART\_E, Senior Online Marketeer at merchant [A])*

One reason mentioned as to why current algorithmic transparency is considered irrelevant by merchants is because it provides them with insight after the event, instead of beforehand. Interview data contains an example of transparency being offered after an issue has occurred.

*It has happened, over a weekend, that a product got a lot of traffic. And then you get in the office on Monday and see that the costs have increased immensely. You only notice that after the event. Naturally, we wanted to know what went wrong. [...] It were all real clicks. We looked into how to prevent this in the future. That is by checking the categories. Or if the platform informs us that another [merchant] withdrew from that category. (PART\_F, SEA Specialist at merchant [B])*

A second reason for the irrelevance of algorithmic transparency, according to merchants, is that the explanation of recommendations offered as part of reasoned transparency, a type of algorithmic transparency, is not sufficient to merchants. The currently provided level of transparency is still appreciated by merchants.

*We are made aware [of] changes made [in the setup of the algorithm, that impact] how the listing works. (PART\_F, SEA Specialist at merchant [B])*

However, current explanations of recommendations do not seem to provide information about recent or upcoming changes in the content of the platform. Merchants find that they are not able to make predictions based on current available information on the algorithm enabling them to take quick action. An interviewee describes what type of transparency would be helpful to merchants instead:

*What we truly want is to be notified if something changes [in the content of the platform]. For example, if there is a significant decrease in product quantity in a certain category. [...] That would help us, because then we can prevent issues. [...] It would have to be very specific notifications. [...] So we can act on it. [...] That is the information that is missing at the moment. The information about the content of the platform. How it's built, or the changes [the publisher] makes themselves, that is being shared with us. [...] Changes to the content, that happens unseen, and we only discover it because a chart is showing a dip. And then we go and investigate, but it is always afterwards. (PART\_F, SEA Specialist at merchant [B])*

## 5. Discussion

In this fifth chapter of the thesis, the research questions will be answered. The outcomes will be summarized as propositions. Furthermore, this chapter will present the limitations and academic relevance of the study. Finally, recommendations for further research will be listed.

### 5.1. Reflection and conclusions

This section first discusses the sub-questions. Next, the central research question will be answered.

#### **SQ 1: What are the current vulnerability issues in affiliate marketing partnerships?**

As the reference literature states (Edelman & Brandi, 2015), the introduction of affiliate marketing, over 15 years ago, was mainly meant as a cure to relations of interdependence, experienced in online marketing. As affiliate marketing has grown exponentially over time, so has the ecosystem evolved and adapted to newly occurring issues, such as fraud or manipulation of commission triggers. The findings of the empirical research in this study have identified various issues affecting the dynamics of coordination and control in the ecosystem. The main vulnerability issues put forward in the interviews were, the risk of the situation where platform commission models are dominating the actors, and power imbalance in the triad. The outcomes are presented as propositions, introduced by their discussion. At the end, a conclusion will answer this sub-question.

Publishers and merchants both feel that they are at risk of high (unexpected) costs. They are basing important decisions, such as opting for a specific commission model, on minimizing that risk. Merchants have been moving away from CPC commission models and opting for CPS-based partnerships instead. After analysing the empirical data of this study, the CPS commission model does not seem to be the high-fraud-risk model Edelman and Brandi (2015) suggested. The outcomes of this case study are more in line with Chachra et al. (2015), suggesting that fraud is less prevalent. This is partially due to the rise of affiliate networks, since they provide the required technology – as discussed in literature by Chachra et al. (2015). However, technology is not the only reason for a merchant to continue working via an affiliate network. Merchants see value in the convenience of starting and ending partnerships with a single click, and monitoring campaign performance closely. Even though commission payments are increased by a fee towards the affiliate networks, merchants are willing to pay in order to reduce the overall risk of unexpected costs. Being charged for high volumes of clicks by publishers is the main concern for merchants. This concern causes merchants to terminate partnerships with publishers as soon as costs start to rise. Publishers share the view of merchants on convenience being a benefit. However, the increased costs (caused by difference in measurement tools) are not entirely worth it for them.

- Current CPC and CPS commission models in affiliate marketing are causing a misalignment of beneficial interactors between merchant and FRS publisher.

Today's affiliate marketing ecosystem is not considered an equal playing field for all participants. Literature has suggested platform based partnerships tend to suffer from power imbalance (Cutolo & Kenney, 2021). The affiliate marketing ecosystem is indeed showing signs of dependency between publisher and merchant. The results of this thesis reflect propositions of Cutolo and Kenney (2021) regarding the conflict of interest as a major issue, in this case, caused by the most commonly used commission models. Each commission model provides a benefit for one party over the other, confirming a 'winner-takes-most' dynamic in the platform ecosystem. With power shifting towards the merchants, the CPS commission model is now often enforced onto the publishers. While

literature proposes that the CPS commission model bares risks for the merchants (Edelman & Brandi, 2015), publishers feel that they are the ones at high risk of increased costs.

- The applied commission models in affiliate marketing are fuelling the relations of power imbalance between publishers and merchants, moving in favour of the position of the merchant.

Taken together, the vulnerability issues of partnerships in the affiliate marketing ecosystem are power asymmetry and dependency. Starting from a weaker position, merchants have developed into the more powerful party by partnering up with affiliate networks. In this affiliate marketing ecosystem, the one with the most power enforces their preferred commission model onto the business partner, exposing that business partner to the risk of high costs. FRS publishers are pushed into that weaker position and are trying to regain their previous position of power by excluding affiliate marketing networks from the triad. Manipulation of commission triggers and fraud appear to be less of an issue than expected in earlier research by Edelman and Brandi (2015). An overall less idealistic ecosystem than expected was found, according to Heimburg and Wiesche (2022). Where the ideal type of an ecosystem is commonly based on notions of equality of all actors, based on relations of value co-creation.

However, this ecosystem thrives on power dependency. While being in this dominant position, the FRS publishers seem to have overplayed their hand. Forcing merchants to accept their terms or to terminate the partnership, has encouraged merchants to opt for the latter. With more and more merchants retreating from the publisher's platform, this has become an issue for the publisher because of their dependency on the merchants. This development has turned the tables in this ecosystem, with merchants becoming the dominant party.

## **SQ 2: What mechanisms should be put in place to overcome the observed vulnerability issues?**

Monitoring KPI's was mentioned, by interviewees in this case study, as one of the main mechanisms to manage campaigns. It provides merchants with an indication of (rising) costs, enabling them to terminate the partnership correspondingly. This performance measurement is heavily relied on by merchants.

However, there is no consensus about the best approach for steering future performance. Current tools show past performance of marketing campaigns, while there is a need to have insight into factors that can predict future performance. Those insights might open up more possibilities to actually improve performance, instead of simply terminating a partnership when performance is low.

- Campaign performance measurement provides merchants with a sense of control.
- An additional mechanism that helps merchants steer campaigns will provide them with an alternative to terminating partnerships with publishers.

Since performance measurement provides a sense of security and control to the merchants, they prefer keeping affiliate networks included in the affiliate marketing ecosystem. However, if algorithmic transparency can provide them with the same sense of security and control, merchants might be more open to direct partnerships with publishers. Direct partnerships are preferred by the publisher because the publisher dislikes the increasing power of the merchants and affiliate

networks. A steering mechanism, in this case based on algorithmic transparency, can be a way to increased collaboration between publisher and merchant, to drive campaign performance.

- Algorithmic transparency can function as a mechanism for publisher and merchants to steer campaign performance.
- Steering campaign performance can contribute to a better partnership between publisher and merchant, diminishing power dependency in the ecosystem and moving more towards value co-creation.

Following this proposition, algorithmic transparency does have its limitations to keep in mind. Even though the case study regards a Knowledge Based FRS, the most basic type of FRS (Chakraborty et al., 2021), merchants still have no thorough understanding of the algorithm models applied. Even employees of the FRS publisher, who are in contact with merchants, admitted they have limited technical knowledge and do not understand the details of the algorithm. Algorithmic transparency could cause confusion, by its complexity (Kaplan, 2020). Algorithms are difficult to explain to non-experts. Providing technical and mathematical information to merchants beyond their level of knowledge, might lead to questions and doubts. That is a fear of the publisher. On one hand they are hesitant to provide more transparency since they are lacking employees with sufficient knowledge in a position to explain the algorithm to the merchants. On the other hand, the employees who do possess that knowledge, are lacking time for explaining the algorithm.

- Algorithms are too complex to be fully understood by merchants, therefore providing transparency as such is no quick fix.

Following the statement of Ananny and Crawford (2016), transparency does not always build trust. As the empirical data revealed, the publisher fears that disclosing more information, by providing more transparency of the algorithm, invites merchants to ask more questions and provide more opinions. This discovery also aligns with Heimburg and Wiesche (2022) in the context of digital platform ecosystems, proposing that although openness enables value co-creation, merchants could exploit openness. This same paradox is a concern expressed by publishers. Merchants might want to be included in decision making, which is not always desirable to publishers.

- Providing algorithmic transparency can raise more questions and discussions, rather than build trust between publisher and merchant.

To sum up, there is a need for an additional mechanism specifically to aid in steering campaign performance. The earlier discussed shift in power towards merchants was fostered by the lack of alternatives to ending partnerships. Algorithmic transparency, used as a steering mechanism, can be that alternative. This would provide the tool to push publisher and merchant to collaborate, moving from power dependency towards value co-creation. However, there are limitations to consider when it comes to algorithmic transparency. One of the limitations is the complexity, which makes it difficult to understand the algorithm. Another limitation is the transparency paradox, where more transparency could lead to more questions and suspicion between publisher and merchant.

With both sub-questions being answered, this leads to answering the main research question of this thesis:

**How may algorithmic transparency play a role in affiliate marketing partnerships, between FRS-publishers and fashion merchants?**

The answer to the central research question can be drawn from the reflection on the previous sub-questions. Algorithmic transparency may be applied to the algorithm of the publisher as to provide the merchant with a performance steering mechanism. Currently, there is a certain level of hesitation from all three perspectives of the triad since their focus is mainly on the limitations of algorithmic transparency. However, the outcomes indicate that algorithmic transparency can play a role in shifting the relations in the triad to a less vulnerable position, particularly for the publisher. If transparency of the algorithm is applied into actionable insights for the merchants, they may be able to build a relationship equality. The optimal shape of a campaign performance steering mechanism, based on algorithmic transparency, for this purpose is still to be determined.

## 5.2. Limitations

As every research approach has its limitations. In addition to the research limitations described in section 3.1.4, this section discusses further limitations encountered in this study.

Initially, an encountered limitation is the focus on solely the CPC and CPS commission models. These were the main commission models applied by the actors in the single case study. Even though these are the most common, including experiences with other commission models could open up other perspectives.

A second limitation was the limited research sample. Even though this was a single case study, more rounds of data collection could be done in the future. Due to time constraints, enlarging the sample in order to triangulate the results was not possible. However, all three points of view (of each party in the triad) were included in the study. Additionally, the case organisation solely operates on the Dutch market. This could mean that participants were more biased as to the context of that particular market.

The final limitation encountered is that there was no differentiation made between merchants in the empirical results, based on their size. There could be a difference in experience and opinion of smaller merchants, compared to larger merchants. In this research all merchants are considered one actor in the triad.

## 5.3. Academic relevance

The main relevance for academic knowledge, contributed by this study, is how algorithmic transparency relates to affiliate marketing partnerships. This study proposes an application of algorithmic transparency in order to improve affiliate marketing partnerships.

Besides, the limitations of algorithmic transparency in the context of (Fashion) Recommendation Systems are discussed. Which are based on the limitations suggested by Kaplan (2020) in the context of healthcare information systems.

Furthermore, this study provides a comparison of the affiliate marketing commission models CPS and CPC, from the perspectives of publisher, merchant, and affiliate network.

## 5.4. Recommendations for future research

As the results are discussed, this presents opportunities for practice, as well as for future research.

Recommendations for practice:

- The main recommendation for FRS publishers is to gain insight into what merchants would specifically consider valuable information to receive. The main focus should be on predicting future traffic, in order to deliver actionable insights to the merchant.

Recommendations for further research:

- The first recommendation is to conduct research focusing on the requirements for a steering mechanism, applying algorithmic transparency while navigating its limitations, to improve partnerships between publisher and merchant. This should lead to a design of a campaign performance steering mechanism, based on algorithmic transparency.
- The second recommendation is to dive deeper into the merchants as a group. It would be interesting to map out research findings per merchant size. Merchants could be split into groups based on yearly turnover, number of products, or social media presence. This should provide insight to the requirements of a steering mechanism per merchant group.

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## Appendix 1

### Literature checklist by Saunders et al. (2019, p. 106)

Evaluating the relevance, value, and sufficiency of literature to your research

#### Relevance

- How recent is the item?
- Is the item likely to have been superseded?
- Are the research questions or objectives sufficiently close to your own research (in other words, does the item meet your relevance criteria for inclusion)?
- Is the context sufficiently different to make it marginal to your research question(s) and objectives (in other words, is the item excluded by your relevance criteria)?
- Have you seen references to this item (or its author) in other items that were useful?
- Does the item support or contradict your arguments? For either it will probably be worth reading!

#### Value

- Has the item been subject to a reviewing process prior to publication?
- Does the item appear to be biased? For example, does it use an illogical argument, emotionally toned words or appear to choose only those cases that support the point being made? Even if it is, it may still be relevant to your critical review.
- What are the methodological omissions within the work (e.g., sample selection, data collection, data analysis)? Even if there are many, it still may be of relevance.
- Is the precision sufficient? Even if it is imprecise, it may be the only item you can find and so still of relevance!
- Does the item provide guidance for future research?

#### Sufficiency

- As I read new items, do I recognise the authors and the ideas from other items I have already read?
- Have I read the work by those acknowledged by others as key researchers in my research area?
- Can I critically discuss the academic context of my research with confidence?
- Have I read sufficient items to satisfy the assessment criteria for my project report?

## Appendix 2

### **Types of Fashion Recommendation Systems (Chakraborty et al., 2021)**

6. Fashion Image Retrieval System  
Based on correlation analysis of feature similarity and individual data.
7. Personal Wardrobe Recommendation System  
Based on wardrobe usage history and matching to similar styles.
8. Knowledge-Based Recommendation System  
Also known as fashion pairing recommendation system or fashion coordination system. Based on styling knowledge and matching types of clothing items.
9. Smart or Intelligent Recommendation System  
Based on features of clothing and user, such as body type or contextual information.
10. Social-Network-Based Recommendation System  
Based on social media information discovery and social collaborations.

### **Algorithmic models and Recommendation Filtering Techniques (Chakraborty et al., 2021)**

The most used algorithmic models are multilayer perceptron (MLP), recurrent neural network (RNN), k-nearest neighbour (kNN), convolutional neural networks (CNN), Bayesian networks, generative adversarial network (GAN) and autoencoder (AE). Besides algorithmic models, FRSs could use other methods, such as Recommendation Filtering Techniques. The most common are content-based filtering (CBF), collaborative filtering (CF), hybrid filtering (HF), and hyperpersonalization filtering.

## Appendix 3

### Interview questions

- What do fashion merchant and FRS publisher view as factors for a successful partnership?
  - What are the risks for the FRS publisher in the partnership?
  - How common are vulnerability issues?
  - In what way(s) do fashion merchants and FRS publishers work on overcoming vulnerability issues?
  - What practices do the fashion merchant and FRS publisher consider to be hurtful to the partnership?
  - Would fashion merchants and FRS publishers consider transparency as a solution to vulnerability issues?
- 
- To what extent are fashion merchants familiar with the types of FRS algorithms?
  - To what extent is there algorithmic transparency in current situations?
  - To what extent do fashion merchants have technical knowledge available to fully comprehend algorithmic models?
  - To what extent are fashion merchants expected by FRS publishers to have technical knowledge available to fully comprehend algorithmic models?
  - What kind of information do fashion merchants expect to receive through algorithmic transparency?
  - What benefits do fashion merchants and FRS publishers expect from algorithmic transparency?
  - What obstacles do fashion merchants and FRS publishers expect from algorithmic transparency?

### Codes used for analysis

Selective codes	Axial codes
Campaign performance	<ul style="list-style-type: none"> <li>- KPI's</li> <li>- Disappointing performance</li> <li>- Quality criteria</li> <li>- Importance of performance measurement</li> </ul>
Partnership	<ul style="list-style-type: none"> <li>- Positions of power</li> <li>- Value of the partnership</li> </ul>
Conflict of interest	<ul style="list-style-type: none"> <li>- Commission models</li> <li>- Vulnerability issues</li> </ul>
Transparency	<ul style="list-style-type: none"> <li>- Applications of transparency</li> <li>- Limitations of transparency</li> </ul>

## Appendix 4

### **Informed consent form**

#### **Consent for Participation in Interview Research**

I volunteer to participate in this research, conducted by a student from the Open University the Netherlands as part of a graduation thesis. I understand that the research is designed to gather information about the Affiliate Marketing industry.

- I have been informed of the nature of the research.
- I agree that the interview will be audio recorded.
- I understand that the data gathered from the interview can be used in the study.
- I have been given a copy of this consent form.

#### **Anonymity**

- I wish to remain anonymous.
- My organization wishes to remain anonymous.

Interviewer:

Signature:

Interviewee:

Signature:

Date: