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Editor's Letter

The current issue of the *Nordic Journal of Business* features two peer-reviewed articles. In the first article, Anu Puusa, Pasi Tuominen, Timo Tammi and Terhi Tuominen focus on the effect of trust and satisfaction on customers' commitment towards their co-operative membership in the Finnish retail sector. The second article by Hanna Silvola, Jan Mouritsen and Jari Huikku investigates how financial analysts use goodwill information in firm valuation.

I hope you enjoy reading the interesting articles included in this issue of the *Nordic Journal of Business*.

Sami Vähämaa

Editor

Nordic Journal of Business

The Effect of Trust and Satisfaction on Customers' Commitment towards Their Co-operative Membership in the Finnish Retail Sector

Anu Puusa, Pasi Tuominen, Timo Tammi and Terhi Tuominen

Abstract

This quantitative study focuses on the co-operative form of business where customer ownership and co-operative principles and values may create additional trust and social capital which is likely to develop stronger commitment toward co-operative membership. The aim is to understand the relationship between trust, satisfaction and affective, continuance and normative member commitment and whether familiarity with the co-operative business model and membership in other loyalty programmes moderate this relationship. Our data is from a Finnish consumer co-operative (belonging to S Group), and we provide unique theoretical, empirical, and practical insights into multiple phenomena and questions concerning customer commitment in retailing. The results indicate that in the context of consumer co-operatives, emotional attachment and economic value are more important drivers for commitment than members' obligation. Moreover, these findings also highlight the importance of taking the context into account, when studying customer (member) commitment.

Keywords:

customer commitment, retailing, consumer co-operative

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1. Introduction

How to gain the commitment of customers is one of the central questions in retail marketing literature as customer commitment impacts customer behaviour (Pandit & Vilches-Montero, 2016). It has been stated that commitment increases customers' desire to form a relationship with a specific service provider (Pandit & Vilches-Montero, 2016) so that they repeat purchases (Wong & Sohal, 2002) and display lower switching intentions (Keh & Xie, 2009; Bansal, Irving & Taylor, 2004). The introduction of various kinds of reward (Pandit & Vilches-Montero, 2016) or loyalty cards (Demoulin & Zidda, 2008) is one example of how retailers strive to increase customer commitment.

Research on co-operative organizations has suggested that commitment is especially important in the context of consumer co-operatives (Jussila, Goel & Tuominen, 2012; Byrne, McCarthy, Ward & McMurtry, 2012) where member commitment can be defined as "a variable that captures the extent to which the member is likely to choose maintaining his/her membership (patronage) in the co-operative" (Jussila, Goel & Tuominen, 2012, 9). That is, these organizations are owned and governed by their customers (members) and exist to conduct concrete activities in such a way as to maximize satisfaction of their members' needs (e.g., Puusa & Saastamoinen 2021). Thus, the member-owners of such organizations benefit through the consumption of services (Mills, 2001; Spear, 2000). It has also been maintained that customer (member) ownership and co-operative principles and values (see Novkovic, 2008) and unique characteristics (Fulton & Adamowicz, 1993) would create additional trust and social capital (see Spear, 2000; Tuominen, Tuominen, Tuominen & Jussila, 2013; Novkovic, Puusa & Miner 2022), which is likely to develop stronger commitment toward co-operative membership. Moreover, scholars have argued that customer-ownership "may hold major implications for how customers ultimately perceive value, which in turn influences the very foundations for companies competitiveness: customer satisfaction, re-purchase intention and recommendation" (Talonen, Jussila, Saarijärvi and Rintamäki (2016) p. 142),

In this study, we build on theories on customer commitment, trust, and satisfaction (e.g., Fullerton, 2014; Pandit & Vilches-Montero, 2016; Kesari & Atulkar, 2016;) and co-operation (e.g., Byrne, 2022; Jussila, Goel & Tuominen, 2012; Novkovic, 2008). Utilizing the three-dimension model of commitment originally developed by Allen and Meyer (1990), we will first focus on the effect of trust and satisfaction on affective, continuance and normative member commitment in a Finnish consumer co-operative operating in the retail sector. Secondly, we examine whether familiarity with the co-operative business model moderates the relationship between trust and affective, continuance and normative member commitment and whether membership in the loyalty programmes of other (non-cooperative) retail stores moderates the relationship between satisfaction and each form of member commitment. This explorative study is based on a quantitative survey (n=3637) and the case organization is one of the regional consumer co-operatives of the Finnish S Group.

Our study has many important contributions to make. First, we offer new insights in the discussion on customer commitment in retailing (e.g., Pandit & Vilches-Montero, 2016; Mukherjee, 2007) by widening the investigations of the effects of trust and satisfaction to customer commitment to the context of consumer co-operatives, where the customers (members) are not only holders of loyalty cards, but also owners of the organization. Customer-ownership is a factor that recent research in retailing and customer commitment has not paid much attention.

Second, we connect trust and satisfaction to the examination concerning affective (Jussila, Byrne & Tuominen 2012), continuance (Jussila, Goel & Tuominen 2012) and normative commitment (Jussila, Roessl & Tuominen, 2014) in the context of consumer co-operatives and provide empirical evidence for the discussion, which so far has mostly been theoretical.

Third, we also pay attention to the role of members' familiarity with the co-operative business model and their memberships of loyalty programmes to other retail stores as moderators of the relationship between trust and satisfaction to each form of commitment in this context. Therefore, we offer new empirical evidence on whether the co-operative organization form (and the resulting differences in company values and ways of operation, for example) and memberships to other loyalty programmes actually matter in terms of customer commitment. This could also give us some important insights concerning the role of values in customer commitment that can be utilized in other contexts as well. Overall, our study will advance understanding of customer relationship management in the retail context.

The study is organized as follows. First, we introduce our research framework, develop our hypotheses and present our conceptual model. Second, we discuss the context, data and methods of the study. After presenting the results, we conclude with theoretical and practical implications as well as suggestions for further research.

2. Research framework and hypothesis development

Customer commitment (e.g., Fullerton, 2014; Gustafsson, Johnson & Roos, 2005; Hur & Kang, 2012; Jones et al., 2010; Lariviere et al., 2014; Murherjee, 2007; Shukla, Banerjee & Singh, 2016; Sääksjärvi et al., 2007; Wu, Zhou & Wu, 2012) has originally been derived from studies of employee behaviour concerning organizational commitment (see Allen & Meyer, 1990). In general, commitment refers to an “*enduring desire to maintain a valued relationship*” (Moorman, Zaltman & Deshpande, 1992, p.316) and it includes three distinctive components; 1) Affective (emotional), 2) continuance (calculative) and 3) normative dimensions. The affective component refers to emotional attachment to, identification with and involvement in the organization, whereas continuance refers to commitment based on the costs associated with leaving the organization and normative commitment refers to individuals' feelings of obligation to remain with the organization (Allen & Meyer, 1990).

Even though other commitment models have also been utilized in customer commitment literature (e.g., Bansal, Irving & Taylor, 2004; Iniesta & Sanchez, 2002), this three-dimensional model is seen as the dominant measure of commitment (e.g., Meyer & Herscovitch, 2001; Jones et al., 2010) and the model is considered as appropriate regardless of the target of commitment (Meyer & Herscovitch, 2001). It has also been used in the context of co-operatives, where **affective** (see e.g., Jussila et al., 2012), **continuance** (e.g., Byrne & McCarthy, 2005; Jimenez, Marti & Ortiz, 2010; Jussila, Goel, Tuominen, 2012; Fulton & Giannakas, 2001; Fulton & Adamowicz, 1993) and **normative** commitment (Jussila, Roessl & Tuominen, 2014) have received some, mainly theoretical, scholarly attention. In the following section we will present our hypotheses and develop a conceptual model to empirically examine customer (member) commitment in the context of consumer co-operatives

2.1 The relationship between trust and customer commitment

In the customer commitment literature, various scholars have highlighted that trust is a precondition factor prior to any relationship commitment and thus, affects commitment positively and/or is considered as an antecedent to commitment (Garbarino & Johnson, 1999; Mukherjee, 2007; Morgan & Hunt, 1994; Pandit & Vilches-Montero, 2016). Moorman, Deshpande and Zaltman (1992), define trust as “a willingness to rely on an exchange partner in whom one has confidence (p. 82)”. Trust is regarded as an important construct when developing and maintaining long-term relationships between the customer and the organization (Pandit & Vilches-Montero, 2016) and is also seen as a critical predictor of purchase intention (Chauhari and Holbrook, 2001).

Scholars have highlighted that trust entails both affective and cognitive dimensions and evaluations of the actions of a relational partner (see e.g., Fullerton, 2003; Hansen, Morrow & Batista, 2002). So far, two main aspects of trust have been acknowledged: credibility and benevolence (see Fullerton, 2011; Doney and Cannon, 1997), which both relate to these cognitive evaluations. *Credibility* represents the extent to which a customer perceives that the promises of a partner can be relied upon whereas *benevolence* represents the extent to which a customer believes that their partner is concerned with acting in the best interests of the customer (Doney and Cannon, 1997). Trust has also been conceptualized as the confidence in the reliability and integrity of the organization (Chai et al., 2015). Next, we present our propositions concerning the relationship between trust and the three forms of member-commitment.

2.1.1. The relationship of trust and affective commitment

Development of trust also entails affective aspects (see Hansen, Morrow & Batista, 2002) and various consumer behaviour scholars have highlighted that trust has a positive effect on affective commitment (e.g., Fullerton, 2011; Mukherjee, 2007; Pandit & Vilches-Montero, 2016). In the context of co-operatives (e.g., Jiménez et al., 2010; Byrne & McCarthy, 2005; Foreman & Whetten, 2002), the affective dimension of commitment is based on an emotional attachment to, and bond with the co-operative society and thus, the central question is: “Do I want to maintain my membership in and patronage of the co-operative?” (Jussila, Byrne, Tuominen 2012, p. 2). Affective member commitment is an essential ingredient for sustainable and successful co-operation and it also provides co-operatives with flexibility and helps to alleviate the problems often associated with co-operation, such as free-riding and horizon differences as well as problems related to property rights (see Jussila, Byrne, Tuominen, 2012).

Trust has a central role when developing the sources for affective member-commitment. For example, the perception of fairness, justice and equality, i.e. that a co-operative is operating in their best interests, only develops when trust exists in a relationship (Fulton & Giannakas, 2001; Fairbairn, 2003; Byrne, 2004, 2012). Further, this perception of fairness potentially leads to identification with the co-operative, which is one of the sources of affective member commitment (see Jussila, Byrne, Tuominen, 2012). In addition, co-operative values and principles (see Novkovic, 2008) are also likely to increase the development of trust and positive feelings toward the co-operative. Therefore, we establish our first hypothesis as follows:

H1: Trust in the co-operative has a positive effect on affective member-commitment.

2.1.2. The relationship of trust and continuance commitment

Continuance (calculative) commitment refers to the need to maintain a relationship given the significant loss of benefits and/or anticipated switching costs associated with leaving (Geyskens et al., 1996; Lewicka, 2014) and these benefits and costs can be economic or non-economic in nature. In the context of consumer co-operatives, this perceived utility may relate to the prices of products or some other attributes associated with the organization (Fulton & Adamowicz, 1993). Here the central question is: “Will co-operative membership (patronage) provide me with more value (rewards minus costs) than can be achieved by shifting membership (patronage) to some other organization?” (Jussila, Goel & Tuominen, 2012, p. 10)

Fulton and Giannakas (2001) propose that member-commitment is affected by the extent to which a co-operative develops a *reputation* as an efficient agent for its members (see also Jiménez et al., 2010) and reputation is heavily based on trust and the social capital of the exchange partner. For example, consumer co-operatives have been seen as social capital-based organizations (see e.g., Pedero and Chrisman, 2006; Spear, 2000; Tuominen, 2013; Valentinov, 2004) in which trust has a central role. It has been argued that co-operative social values and principles are likely to increase the development of trustful relationship (see Novkovic, 2008; Davis & Burt, 2007; Valentinov, 2004; Spear, 2000; Fulton and Hammond-Ketilson, 1992; Normark, 1996) and trustful relationships with the important stakeholders is vital due to the geographically bound purpose of consumer co-operatives (Tuominen, 2013). Based on these arguments, we propose:

H2: Trust in the co-operative has a positive effect on continuance member commitment.

2.1.3. The relationship of trust and normative member commitment

Fullerton (2014) has argued that trust also has a positive impact on normative commitment. According to Jussila, Roessl & Tuominen (2014, 26), **normative member commitment** “reflects a member’s sense of obligation to maintain membership and patronage in the co-operative”. In the context of agricultural co-operatives, Jimenez, Marti and Ortiz (2010) maintain that family and cultural socialization, organizational socialization and institutionalization of norms operate as bases of normative member-commitment (“obligation based”). Moreover, Fulton (1999) continues that “there are people that will never do business with anywhere but a co-op (p.427)”, even if other choices are available. Fulton (1999) sees that this preference may stem from members’ sense of being part of a distinct collective that works against “capitalists and business barons (p. 423)”.

According to Jussila, Roessl, Tuominen, (2014), education and institutional marketing help facilitate awareness of coalition membership, identification with the coalition, internationalization of the co-operative philosophy, and the recognized realization of the co-operative’s values and principles – which lead to the development of normative member commitment in which the customer (member-owner) will maintain their membership of the co-operative, as otherwise the coalition will have less power. Consumer co-operatives’ values and principles are also likely to increase members’ trust toward their co-operative (see Valentinov, 2004; Novkovic, 2008) and when members have socialized and internalized the co-operative philosophy, they are more likely to develop strong normative commitment. Thus, we propose the following:

H3: Trust in the co-operative has a positive effect on normative member commitment.

2.2. The relationship between satisfaction and customer commitment

Customer satisfaction has been one of the central topics in consumer service research (e.g., Kesari & Atulkar, 2016; Söderlund & Colliander, 2015; Kwon, Ha & Im, 2016). In general, satisfaction can be defined as “*an overall evaluation based on the total purchase and consumption experience with a good or service over time*” (Anderson, Fornell & Lehmann, 1994, p. 54). The study by Kesari & Atulkar (2016) suggest that customer satisfaction is based on utilitarian shopping values (monetary saving, selection, convenience and customized products) and hedonistic values (entertainment, exploration, place attachment and social status). Söderlund & Colliander (2015) have also argued that loyalty programme rewards have a positive impact on customer satisfaction (especially equity-reward and over-reward). Moreover, Kwon, Ha and Im (2016) suggest that the mere presence of other shoppers can be influential, when there is perceived similarity between a customer and others. Thus, the similarity perception is hypothesized to influence customer’s mall satisfaction through affective and cognitive processes (Kwon, Ha & Im, 2016).

When it comes to commitment, Heskett, Jones, Loveman, Sasser and Schlesinger (1994) argue that the more satisfied the customer is in their service experience, the more committed they are to the organization. Similarly, Dimitriades (2006) argues that satisfaction has a positive impact on commitment. Garbarino and Johnson (1999) have also linked customer satisfaction to customer commitment and the similar positive effect of satisfaction to commitment has been also proved in the workplace behaviour research (e.g., Clugston, 2000; Konovsky, 1991). In the following we will present our propositions concerning the relationship between satisfaction and the three forms of member commitment.

2.2.1 The relationship of satisfaction and affective commitment

In consumer behaviour research, various scholars have argued that satisfaction has a strong impact on affective commitment (e.g., Bansal, Irving & Taylor, 2004; Fullerton, 2011; Morgan and Hunt, 1994; Johnson, Sivadas & Garbarino, 2008). For example, Fullerton (2011) argues that satisfaction is likely to affect affective commitment as consumers like to maintain relationships with those organizations that they perceive as delivering superior value relative to competing organizations in the marketplace (Morgan and Hunt, 1994). Furthermore, since the nature of affective commitment is based on identification and emotional attachment, it is the case that consumers tend to identify with and become attached to those organizations that have a track record of delivering satisfactory experiences (i.e. the co-operative has operated according to its corporate purpose and offered better products and services than its competitors, see Tuominen, 2012).

Thus, prior experience of the organization and/or the prior experience with the category of service affect affective commitment (Johnson, Sivadas & Garbarino, 2008). Based on these arguments, we propose:

H4: Members’ satisfaction (with the services) has a positive effect on affective commitment (to membership of a co-operative).

2.2.2 The relationship of satisfaction and continuance commitment

In contrast to affective commitment, continuance commitment is a neutral or even negative psychological state (Fullerton, 2003). According to Wu, Zhou and Wu (2012), "When a customer rationally weighs alternatives and switching costs, and finds no better alternatives or the switching costs too high, that customer has to stay with the current choice (p. 1762)." In the context of co-operatives, this means that when the member is satisfied with the services a co-operative offers, they are more likely to develop stronger continuance commitment as they have evaluated the overall services/service level as superior compared to other alternatives (regarding the definition of satisfaction, see Anderson, Fornell & Lehmann, 1994). According to Byrne and McCarthy (2005), the perceived value of the products or services offered by the co-operative is also affected by the co-operative's communication and marketing activities *constructing* the idea of co-operative difference and advantage. Therefore, we propose the following:

H5: Members' satisfaction (with the services) has a positive effect on continuance commitment (to membership of a co-operative).

2.2.3. The relationship of satisfaction and normative commitment

Compared to other forms of commitment, *normative commitment* has not received much scholarly attention in a marketing context as only a few studies have specifically examined the nature, antecedents and effects of the construct (Bansal, Irving & Taylor, 2004, Gruen et al., 2000, Bloemer and Odekerken-Schroder, 2007). However, findings from the context of workplace behaviour (e.g., Clugstonin, 2000) suggest that satisfaction is likely to affect normative commitment positively and the nature of commitment has been seen as being the same regardless of the target of commitment (Meyer & Herscovitch, 2001).

Normative commitment develops through socialization and when the customer internalizes subjective norms that a certain kind of social behaviour is appropriate or not and these subjective norms reflect social pressure to a certain extent (see Bansal, Irving & Taylor,, 2004). When the customer is satisfied with the services and products of the co-operative, they are more likely to also internalize the norm that they should remain a member of the co-operative as 'staying' is the right and proper thing to do (normative member commitment has been theoretically examined by Jussila, Roessl, Tuominen, 2014). They are also likely to identify more with the co-operative and internalize the co-operative's philosophy, values and principles which in turn, has a positive effect on normative member commitment (Jussila et al., 2014). Therefore, we propose the following:

H6: Members' satisfaction (with the services) has a positive effect on normative commitment (to membership of a co-operative).

2.3. Memberships to loyalty programmes of other retail stores as a moderator of the relationship of trust and three forms of member commitment

Previous research (e.g., Demoulin & Zidda, 2008; Garcia Gómez, Gutiérrez Arranz, & Gutiérrez Cillán, 2006; Lewis, 2004; Noordhoff, Pauwels, & Odekerken-Schröder, 2004; Pandit & Vilches-Montero, 2016) has highlighted that loyalty programmes and reward cards increase

retail customers' loyalty. However, often there are also competing loyalty programmes that weaken this impact in many customer segments (e.g., Allaway, Gooner, Berkowitz & Davis, 2006; Meyer-Waarden & Benavent, 2009; Wright & Sparks, 1999). Thus, loyalty programmes designed to increase customer loyalty may only do so indirectly and there is also a certain amount of uncertainty related to the sequence of the membership-commitment relationship (Juga & Juntunen, 2017).

In the context of co-operatives, it has been indicated that trust is likely to increase member-commitment (e.g., Jimenez, Marti & Ortiz, 2010; Byrne & McCarthy, 2005; Jussila, Byrne, Tuominen, 2012; Jussila et al., 2014) and scholars have highlighted that some members do not consider themselves as owners but as regular customers (e.g., Jussila, Tuominen, Tuominen, 2012). Additionally, even though co-operative membership requires some degree of commitment (i.e. in the form of using the services provided by the co-operative), many of the member-owners also belong to the loyalty programmes of other retail stores as well. In fact, Zhang, Gangwar & Seetharam (2017) have argued that store loyalty should be regarded as a category specific trait, because a consumer can be loyal to store A in category one while at the same time being loyal to store B in category two. For example, households are often loyal to different stores for different product categories (see Zhang, Gangwar & Seetharaman, 2017) and thus have memberships to the loyalty programmes of several retail stores (including retail co-operatives).

When members of a retail co-operative have memberships to loyalty programmes of other retailers, it is likely that the member-owner experiences that the retail co-operative alone cannot provide all the products and services they need with the best terms and thus do not trust that the co-operative can provide the best benefits in all product/service categories (about the corporate purpose of consumer co-operation, see Tuominen, 2012). In contrast, if the member-owners are not members of the loyalty programmes of other retail stores, it is likely that the member-owners trust that the co-operative can provide all the services/products they need and that the co-operative takes the best care of their members' needs. Therefore, we propose:

H7a,b,c: The effect of trust on three forms of member commitment (a, b and c denoting normative, continuance and affective, respectively) will be moderated by membership to the loyalty programmes of other retail stores.

2.4. Familiarity with the co-operative form of business as a moderator between the relationship of satisfaction and three forms of member commitment

Previous research (e.g., Heskett et al., 1994; Dimitriadis, 2006; Garbarino & Johnson, 1999) has indicated that customer satisfaction increases customer commitment (i.e. satisfied customers are likely to repeat purchases from a specific store). In the context of consumer co-operatives, the social values and principles of co-operatives are likely to increase the development of trustful relationships (see Novkovic, 2008; Davis & Burt, 2007; Valentinov, 2004; Spear, 2000; Fulton and Hammond-Ketilson, 1992; Normark, 1996) and geographically bound purpose of consumer co-operatives (Tuominen, 2012) is likely to increase members' commitment to the co-operative. Further, while consumer co-operatives are customer-owned organizations, they should be able to provide their members outstanding customer satisfaction, both in terms of the quality of goods and services and of benefits (Sparks, 2002).

Therefore, communication of the co-operative form of business and its benefits can be regarded as important tools to increase the familiarity of the co-operative form of business and

to communicate its unique competitive advantages compared to IOFs (Investor-owned-Firms), which in turn can increase satisfaction and member commitment. For example, according to LeBlanc & Nguyen (2001), management should ensure that the benefits and rewards associated with being a member of a co-op are regularly promoted in activities aimed at positioning this form of organization in the minds of customers. However, according to Puusa, Mönkkönen & Varis (2013), in practice, the characteristic features of co-operative form of business remain surprisingly unknown or at least poorly understood.

An important issue in the sustainable development of the cooperatives is their ability to deliver value to their members (Mazzarol, Soutar, & Limnios, 2012) and the ability to deliver superior value to members is also closely related to members' satisfaction. According to Talonen, Jussila, Saarijärvi & Rintamäki, (2016), members' value perceptions may differ, ranging from economic and functional value to emotional, symbolic and social value. Consequently, members are likely to emphasize different aspects of value when assessing their satisfaction. Further, we argue that familiarity with the co-operative form of business is also likely to have an impact on satisfaction. That is, members familiar with the co-operative form of business are more likely to understand the total benefits (individual and collective/community) that the co-operative is able to produce, whereas members not familiar with it are more likely to see the co-operative just as a business among businesses (with the focus being on their own individual economic benefits). Therefore, we argue that:

H8a,b,c: The effect of satisfaction to three forms of member commitment (a, b and c denoting affective, continuance and normative, respectively) will be moderated by the familiarity with the co-operative form of business.

Finally, based on the hypotheses presented above, we present the conceptual model of the study as follows:

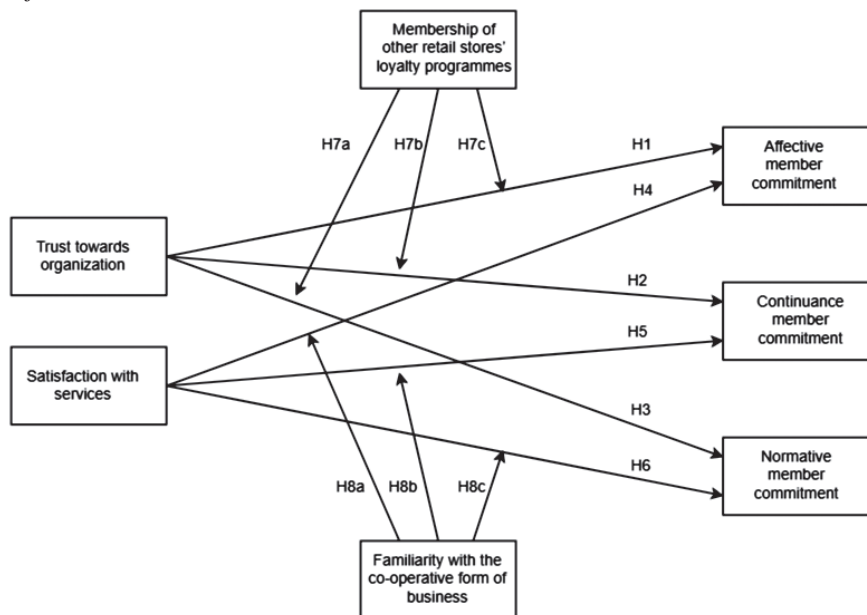


Fig. 1. Conceptual model

3. Data, methods and variable construction

In order to investigate how trust and satisfaction, and their interaction with familiarity with the co-operative business model and membership of loyalty programmes to other (non-co-operative) retail stores, are associated with commitment to co-operative membership, we carried out a questionnaire survey among the members of a regional retail co-operative of S Group in Finland. S Group consists of 19 regional co-operatives and central unit SOK with its subsidiaries. It operates in the supermarket trade, the department store and speciality store trade, service station store and fuel sales, the travel and hospitality business and the hardware trade. Additionally, some of the co-operatives have car dealerships and agricultural outlets in their regions. The group also provides its members with comprehensive banking services through S-Bank (S-ryhma.fi, accessed 12.3.2023). The case co-operative in turn is owned by its 79,000 members. Its mission is to provide competitive benefits and services to its owner-members and contribute to the vitality of the region where it operates (North Karelia). It is noteworthy that the competitive situation in the Finnish retail sector is considered to be practically a duopoly (Xavier & Xing, 2016) as there are two powerful domestic retail chains (Nielsen, 2019): S Group (46.2% market share) and K Group (36.5% market share). German retail chain Lidl holds the third position with 9.6% market share of the Finnish retail market (Nielsen, 2019). Nevertheless, even though our case co-operative operates in relatively sparsely populated area, in many cases co-operative members have more than one service provider from which they can choose to acquire the products and services they need.

In the questionnaire, when measuring members' commitment toward their co-operative membership, we applied the scale by Allen and Meyer (1990). It is worth noting that the measurement by Allen and Meyer (1990) was originally utilized in the workplace context (measuring employees' organizational commitment), but it has later been applied to the field of customer commitment. Thus, we modified the questions in order to ensure better suitability to our research context.

Secondly, in terms of measuring satisfaction, we applied the question of overall satisfaction by Spreng, MacKenzie & Olshavsky (1996). In addition, we wanted to consider crucial factors related to members' satisfaction to the realization of co-operatives' corporate purpose (to provide members with services/products and/or lower prices and to be a superior option for members). Thus, we added the following questions related to the satisfaction measurement in the questionnaire: "The products and services of PKO fulfil my expectations", "I have good experiences of PKO", "My decision to join to become a member of PKO was right" and "PKO offers suitable products and services to me."

Thirdly, the measurement of trust was based on the measurement used in the study of Caceres and Pappas (2007). That is, we used two similar statements than in their study ("PKO genuinely cares about my needs" and "I trust in PKO"), but we also added a third statement "PKO is interested in my well-being"). When measuring commitment, trust and satisfaction, the survey answers were located on a Likert scale of 1–5 (scale 1 being "totally disagree" and scale 5 "totally agree").

A questionnaire was sent to all the members who had allowed the co-operative to send e-mail messages to them. Therefore, the sample may be biased due to the e-mail transmission of the questionnaire and the dependence on how active recipients are in responding to their e-mail. As the socio-economic member data of the co-operative is not available, we made background variable comparisons with the available regional data¹. It was found that females, 30–59-year-olds, those with a tertiary education degree, and households with a greater than

¹ Statistics Finland's PxWeb databases on population, income and education in Finland (<http://pxnet2.stat.fi/PXWeb/pxweb/en/StatFin/>).

average annual income (from 30,000 to 39,000 euros) are slightly over-represented when compared to the total population in the area. On the other hand, the respondents are typical daily customers of the co-operative. Table 1 shows the frequencies of the background variables. Hence, about two-thirds of the respondents were female (66.1%) as well as 30–59 years of age (64.9%). The largest educational groups were those with a vocational education degree (41.8%) and those having a tertiary education degree (40.7%). Up to 59.1% of the respondents belong to households with an annual income between 20,000 and 59,000 euros.

Altogether 3637 questionnaires were returned. The data was cleaned by dropping respondents who responded to the Likert scale question with the same value for more than 67% of the questions. In consequence, the number of observations dropped to 3253.

Table 1. Background variables

VARIABLE	FREQ.	%
Gender		
Male	1103	33.9
Female	2150	66.1
Total	3253	100.0
Age group		
≤ 17	1	0.0
18–29	534	16.4
30–39	708	21.8
40–49	690	21.2
50–59	714	21.9
60–69	505	15.5
70–79	99	3.0
≥ 80	2	0.1
Total	3253	100.0
Education		
Basic education	205	6.3
Upper secondary school	267	8.2
Vocational education	1361	41.8
Bachelor's degree	832	25.6
Master's degree	491	15.1
Other	97	3.0
Total	3253	100.0
Annual incomes (Euros)		
≤ 4,999	131	4.0
5,000–9,999	134	4.1
10,000–14,999	152	4.7
15,000–19,999	160	4.9
20,000–29,999	487	15.0
30,000–39,999	547	16.8
40,000–49,999	493	15.2
50,000–59,999	393	12.1
60,000–79,999	473	14.5
80,000–99,999	179	5.5
≥ 100,000	104	3.2
Total	3253	100.0

Table 2. shows the items used in the factor analysis which were used in constructing the corresponding factor score variables. A principal component analysis with a Promax rotation (Kappa = 1.5) resulted in the three factors having highly acceptable Cronbach Alphas (all greater than 0.85).

Table 2. Principal component solution for affective, normative and continuance commitments

VARIABLE	OBS.	AFFECTIVE COMMITMENT	NORMATIVE COMMITMENT	CONTINUANCE COMMITMENT
I could be a member of PKO for the rest of my life.	3253	0.777		
When I talk about PKO. I talk about it in a positive way.	3253	0.785		
I am rather a member of PKO than a member of some other similar organization.	3253	0.699		
I am committed to PKO.	3253	0.655		
The membership of PKO is meaningful to me.	3253	0.646		
In my opinion people change their memberships to various chains too easily	3253		0.659	
In my opinion people should be loyal to their membership	3253		0.762	
Switching from one company to another seems unethical	3253		0.824	
I am loyal to PKO and thus feel like I have a moral duty to remain as a member	3253		0.783	
In my opinion it would be wrong to terminate the membership of PKO even if another company would offer me better benefits	3253		0.758	
I have been taught to remain loyal towards the company in which I am a member	3253		0.723	
Terminating the membership of PKO would cause me financial losses	3253			0.829
Membership of PKO is a necessity to me	3253			0.674
If I would terminate my membership in PKO, other companies could not offer me the same benefits	3253			0.690
<hr/>				
Component correlations				
Affective commitment			0.233	0.225
Normative commitment		.233		0.209
Continuance commitment		.225	.209	
<hr/>				
Rotation sums of squared loadings		4.021	4.889	2.976
Cronbach's Alpha		0.870	0.901	0.774

Principal Component Analysis with Promax rotation. Bartlett's Test of Sphericity: 26195.927 ($p < 0.001$). KMO = 0.933.

Table 3 shows the result of factorizing trust and satisfaction. The principal component analysis with a Promax rotation (Kappa = 1.5) resulted in the two factors having highly acceptable Cronbach Alphas (both greater than 0.85).

Table 3. Principal component solution for satisfaction and trust

VARIABLE	N	SATISFACTION WITH SERVICES	TRUST TOWARD THE CO-OPERATIVE
Overall, I am satisfied with the products and services of PKO	3253	0.804	
The products and services of PKO fulfil my expectations	3253	0.820	
I have good experiences of PKO	3253	0.790	
My decision to join to become as a member of PKO was right	3253	0.728	
PKO offers suitable products and services to me	3253	0.812	
PKO genuinely cares about my needs	3253		0.856
I trust in PKO	3253		0.690
PKO is interested in my well-being	3253		0.902
Component correlations			
Satisfaction			0.271
Trust		0.271	
Rotation sums of loadings			
		3.997	2.953
Cronbach's Alpha			
		0.902	0.862

Principal Component Analysis with Promax rotation. Bartlett's Test of Sphericity: 16505.398 (p<.001). KMO = 0.889

Table 4. Categorical focal variables

FAMILIARITY WITH CO-OPERATIVE FORM OF BUSINESS*	FREQ.	%	MEMBERSHIP OF ANOTHER CHAIN OF SHOPS	FREQ.	%
1 Strongly disagree	121	3.7	No other memberships	1138	35.0
2 Somewhat disagree	459	14.1	Other memberships	2115	65.0
3 Neither disagree nor agree	653	20.1	Total	3253	100
4 Somewhat agree	1358	41.7			
5 Strongly agree	662	20.4			
Total	3253	100			
Constructed two-category variable					
Not familiar (1 to 3)	1233	37.9			
Familiar (4 and 5)	2020	62.1			

*The respondents were asked to express their opinion to the following claim: I am familiar with the co-operative form of business

The two focal variables in table 4 pertaining to the respondent's membership of another chain of shops and their familiarity with the co-operative form of business have a key role in our model. The membership of another chain of shops is transformed into a dummy variable where 'yes' is coded as 1 and 'no' as 0. Familiarity with the co-operative form of business is transformed into a dummy variable where the original values 4 and 5 are coded as 1 and values 1 to 3 as 0. Table 5 shows the descriptive statistics and correlations of the variables entered in the model reported in section 5.

Table 5. Descriptive statistics and correlations

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Mean	SD												
Normative commitment (1)	0	1	1.000											
Affective commitment (2)	0	1	0.233	1.000										
Continuance commitment (3)	0	1	0.209	0.225	1.000									
Satisfaction with services (4)	0	1	0.085	0.583	0.206	1.000								
Trust in organization (5)	0	1	0.439	0.593	0.254	0.271	1.000							
Membership in the loyalty programmes of other retail stores (6)	.650	.477	-0.153	-0.066	-0.043	-0.006	-0.039	1.000						
Familiarity with the co-operative business model (7)	.621	.485	0.080	0.124	0.013	0.082	0.100	-0.048	1.000					
Gender (8)	.661	.474	-0.024	0.080	0.103	0.114	0.049	0.117	-0.125	1.000				
Age (9)	4.077	1.413	0.270	0.076	-0.037	-0.060	0.160	-0.090	0.210	-0.129	1.000			
Tertiary education (10)	.407	.491	-0.275	-0.098	-0.035	-0.001	-0.170	0.096	0.041	0.007	-0.129	1.000		
Annual incomes (11)	6.455	2.419	-0.090	0.018	-0.036	0.011	-0.015	0.074	0.105	-0.068	0.131	0.249	1.000	
Membership years in PKO (12)	3.539	1.267	0.175	0.124	0.035	-0.006	0.130	-0.012	0.210	-0.030	0.549	-0.051	0.230	1.000

4. Results

To test the hypotheses that three forms of commitment are each a function of satisfaction and trust, and whether membership in another chain of shops and familiarity with co-operative forms of business moderate the effects of satisfaction and trust, we performed four OLS-regressions. Models M1 to M3 consist of different independent variables (affective, continuance and normative commitment) but similar sets of focal variables, interaction terms and controlling variables.

Table 6. OLS regressions of normative, affective and continuance commitments on the sets of predictors

	M1 AFFECTIVE			M2 CONTINUANCE			M3 NORMATIVE		
	B	SE	t Stat	B	SE	t Stat	B	SE	t Stat
Satisfaction	0.466***	0.018	25.753	0.082***	0.026	3.209	-0.046**	0.023	-2.032
Trust	0.437***	0.021	21.136	0.264***	0.029	9.023	0.424***	0.026	16.189
Familiarity	0.059**	0.025	2.321	-0.009	0.036	-0.252	0.017	0.032	0.542
Other membership	-0.097***	0.025	-3.818	-0.094***	0.036	-2.629	-0.198***	0.032	-6.182
Familiarity x Satisfaction	-0.017	0.024	-0.731	0.088***	0.034	2.602	0.072**	0.030	2.368
Other membership x Trust	0.026	0.025	1.029	-0.072**	0.035	-2.067	-0.075**	0.031	-2.379
Female	0.033	0.026	1.278	0.164***	0.036	4.501	-0.014	0.033	-0.438
Age 30–39	0.035	0.042	0.821	0.015	0.060	0.246	0.058	0.053	1.097
Age 40–49	-0.012	0.044	-0.261	-0.169***	0.062	-2.703	0.131**	0.056	2.350
Age 50–59	-0.037	0.045	-0.823	-0.278***	0.064	-4.345	0.260***	0.057	4.546
Age 60–69	-0.045	0.049	-0.914	-0.200***	0.069	-2.880	0.438***	0.062	7.043
Age 70–	-0.048	0.081	-0.596	-0.116	0.114	-1.018	0.579***	0.102	5.679
Tertiary education	-0.041	0.026	-1.583	-0.007	0.037	-0.180	-0.321***	0.033	-9.809
Membership years in PKO									
1–4	-0.021	0.066	-0.316	0.075	0.093	0.807	0.094	0.084	1.129
5–9	0.031	0.066	0.471	0.186**	0.093	2.006	0.064	0.083	0.774
10–19	0.042	0.066	0.627	0.196**	0.094	2.082	0.093	0.084	1.112
20–29	0.157**	0.074	2.131	0.194*	0.104	1.866	0.150	0.093	1.617
30–39	0.304***	0.085	3.583	0.238**	0.120	1.979	0.257**	0.107	2.392
40–	0.196*	0.111	1.772	0.561***	0.157	3.580	0.247*	0.140	1.763
Annual incomes (€)									
5000–9999	0.024	0.083	0.287	-0.078	0.117	-0.670	-0.021	0.104	-0.205
10000–14999	0.197**	0.080	2.442	0.008	0.114	0.072	-0.066	0.102	-0.648
15000–19999	0.177**	0.080	2.207	0.035	0.113	0.310	-0.012	0.101	-0.120
20000–29999	0.145**	0.068	2.146	-0.094	0.095	-0.984	0.016	0.085	0.189
30000–39999	0.128*	0.067	1.907	-0.085	0.095	-0.900	-0.012	0.085	-0.141
40000–49999	0.150**	0.068	2.211	-0.093	0.096	-0.969	-0.080	0.086	-0.936
50000–59999	0.097	0.070	1.389	-0.096	0.099	-0.969	-0.080	0.089	-0.903
60000–79999	0.137**	0.070	1.964	-0.070	0.099	-0.713	-0.157*	0.088	-1.784
80000–99999	0.080	0.081	0.992	-0.189*	0.114	-1.649	-0.175*	0.102	-1.708
100000–	0.240***	0.092	2.609	0.036	0.130	0.279	-0.215*	0.116	-1.848
Constant	-0.150*	0.084	-1.792	-0.013	0.118	-0.112	0.036	0.106	0.335
Observations		3253			3253			3253	
R-squared		0.555			0.112			0.290	
F-test		138.83			13.95			45.31	
p-value		<.001			<.001			<.001	

In reporting the regression results we follow the marginal effect approach (see Kingsley et al. 2017 and Busenbark et al. 2022). Broadly, a marginal effect of X (independent variable) on Y (dependent variable) is a function of Z (moderating variable). The marginal effect for a regression model $Y = \beta_0 + \beta_1 * X + \beta_2 * Z + \beta_3 * X * Z$ is given by the derivative of the model with respect to X , that is $\delta Y / \delta X = \beta_1 + \beta_3 * Z$. When Z is dichotomous having values 0 and 1, the effect of X on Y is β_1 when $Z = 0$ and $\beta_1 + \beta_3$ when $Z = 1$. Furthermore, a significant interaction term indicates that the marginal effects are different. The tests of the significance of the marginal effects (whether they are different from zero) show if there is an association between X and Y when Z is 0 or 1.

First, regarding *affective continuation* Table 6 shows that both interaction terms fell short of statistical significance – viz. the effect of satisfaction on affective continuance is not moderated by familiarity with the co-operative form of business ($B = -0.017$; $p > .05$) nor is the effect of trust on affective continuance moderated by membership to the loyalty programmes of other retail stores ($B = 0.026$; $p > .05$). Therefore, we can reject hypotheses H7c and H8a. However, to gain more information (see Kingsley et al. 2017) we probed the interactions in Table 7 which shows that the impact of trust is positive and significant on both conditions of membership – viz., ($B = 0.437$; $p < .001$) for those not having a membership to the loyalty programmes of other retail stores; ($B = 0.463$; $p < .001$) for those having such a membership). Consequently, H1 gets support. Correspondingly, the impact of satisfaction is also positive and significant on both conditions of familiarity, namely ($B = 0.466$; $p < .001$) for those not familiar with the co-operative form of business and ($B = 0.448$; $p < .001$) for those who are familiar with the co-operative form of business. Hence, H4 gets support. In addition, although not hypothesized, familiarity with the co-operative form of business has a small and significant positive effect ($B = 0.060$; $p < .05$) on affective continuation and membership to the loyalty programmes of other retail stores has a small and significant negative effect ($B = -0.096$; $p < .001$) on affective continuation.

Next, considering *continuance commitment* (model M2) the results in Table 6 show that there is significant interaction between familiarity with the co-operative form of business and satisfaction ($B = 0.088$; $p < .01$) and, also between membership to the loyalty programmes of other retail stores and trust ($B = -0.073$; $p < .05$). The further details in Table 7 and in Figure 2 (Panel b) indicate that satisfaction has a positive impact on continuance commitment on both conditions of familiarity – viz., when a customer is not familiar with the co-operative form of business ($B = 0.082$; $p < .01$) and, even a stronger impact when being familiar ($B = 0.170$; $p < .001$). In consequence, H5 and H8b get support. Regarding trust, it can be seen in Table 7 and in Figure 2 (Panel b) that trust is positively associated with continuance commitment regardless of having or not having membership to the loyalty programmes of other retail stores. However, the association is stronger if a customer does not have such a membership ($B = 0.264$; $p < .001$) than if s/he has ($B = 0.192$; $p < .001$) lending support to H2 and H7b.

Finally, with respect to *normative commitment* (model M3), Table 6 shows that there is significant interaction between familiarity with the co-operative form of business and satisfaction ($B = 0.072$; $p < .05$) and, also between membership to the loyalty programmes of other retail stores and trust ($B = -0.075$; $p < .05$). The further analysis in Table 7 and in Figure 2 (Panel c) suggest that satisfaction has either positive or negative impact on normative commitment depending on the moderator's value. Hence, the impact is negative ($B = -0.046$; $p < .05$) when the customer is not familiar with the co-operative form of business but does not deviate from zero ($B = 0.025$; $p < .05$) when the customer is familiar with the co-operative form of business. Consequently, H6 is rejected and H8 gets support. As for the other interaction, Table 7 and figure 2 (Panel c) show that trust has a positive impact on normative commitment on both

conditions of membership – viz., when a customer does not have a membership to the loyalty programmes of other retail stores ($B = 0.426$; $p < .001$) or, albeit to a lesser extent, the customer has a membership to the loyalty programmes of other retail stores. (0.349 ; $p < .001$). Therefore, H3 and H7a get support.

To sum up the results, we found that, independently of the proposed moderators, both satisfaction and trust have a strong positive influence on affective commitment. In the other two cases the moderators have a role. First, trust has a positive impact on continuance and normative commitment and a membership to the loyalty programmes of other retail stores weakens the impacts slightly. Second, satisfaction has a weak positive influence on continuance commitment the influence being stronger if one is familiar with the co-operative form of business. But contrary to our expectations, we found a small negative influence of satisfaction on normative commitment in the case one is not familiar with the co-operative form of business. For those being familiar, there is no association between satisfaction and normative commitment.

Table 7. Marginal effects of trust and satisfaction on normative, affective and continuance commitment

TRUST			
Moderating variable	Affective commitment	Continuance commitment	Normative commitment
Membership to the loyalty programmes of other retail stores			
No (= 0)			
Yes (= 1)	0.437***	0.264***	0.426***
Significant interaction terms	0.463***	0.192***	0.349***
	No	Yes	Yes
Satisfaction			
Familiarity with the co-operative form of business			
No (= 0)			
Yes (= 1)	0.466***	0.082**	-0.046*
Significant interaction terms	0.448***	0.170***	0.025
	No	Yes	Yes

* $p < .05$; ** $p < .01$; *** $p < .001$
 Note: a Interaction term significances taken from the corresponding regressions in Table 6. Significance indicates evidence for the difference of the marginal effects.

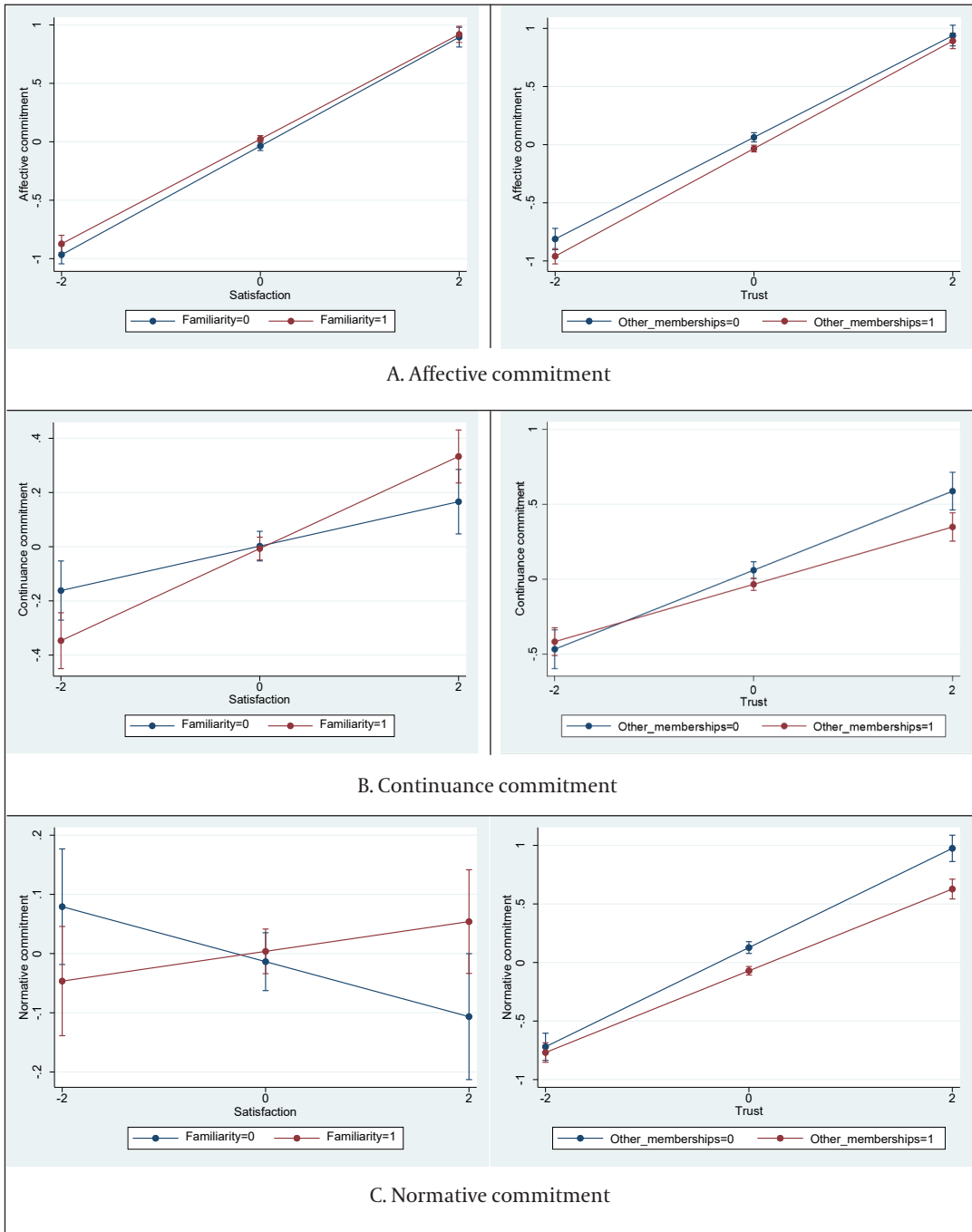


Figure 2. Effects of satisfaction and trust on normative, affective and continuance commitments at different values of the moderators

Regarding the control variables, the results show that females' continuance commitment is at a higher level than the corresponding commitment in males ($B = 0.164$; $p < .001$), but that such difference does not exist in the other two forms of commitment. Older age groups have a higher average normative commitment, but lower continuance commitment than the youngest age group (below 30 years old). Those having a tertiary education degree have a lower average normative commitment than other educational groups ($B = -0.321$; $p < .001$). However, no difference exists in the other two forms of commitment. Annual household income is associated only with affective commitment, viz. almost all income groups with 5000 euros and above have a higher affective commitment than the lowest income group. Finally, it also appears that those who have been a member of PKO for a long time have a higher average normative and affective commitment than those who have joined more recently. However, the average continuance commitment is already higher among those who have been a member from five to nine years than among those having a shorter membership. This difference remains at the same level when moving to 'older' membership groups until the difference becomes much larger in the case of those having more than 40 years of membership.

5. Discussion

This study contributes to the discussion on customer commitment in retailing (e.g., Pandit & Vilches-Montero, 2016; Mukherjee, 2007), focusing on the relationship between a customer and a company in a unique co-operative context, where customers are not only holders of loyalty cards. Instead, these organizations are owned and democratically controlled by their customers (members). As regards the relationship of trust to the three forms of commitment, our findings are consistent with previous research (Garbarino & Johnson, 1999; Mukherjee, 2007; Morgan & Hunt, 1994; Pandit & Vilches-Montero, 2016) in that we found that trust positively affects all forms of customer commitment, although the effect of trust was relatively weak on continuance commitment. This might be explained by the fact that trust is more likely to create more positive emotional or normative feelings (which are more likely to produce affective or normative commitment) – whereas continuous commitment is more calculative in nature. While research has showed that competing loyalty programmes weaken customers' loyalty (e.g., Allaway et al., 2006; Meyer-Waarden & Benavent, 2009; Wright & Sparks, 1999), our study shows that memberships to other loyalty programmes weakens the effect of trust to all forms of member-commitment (overall, 65% of the members had loyalty cards for other retail stores). This seems reasonable, as if the member has loyalty cards to other retail stores, it is an indicator that they also utilize other available service providers (competing stores) instead of shopping exclusively at the co-operative. Consequently, the importance of co-operative membership is likely to be lower and the customer is also less likely to become emotionally, calculatively or normatively committed to co-operative membership, when compared to those who do all their shopping in a co-operative. Nevertheless, this study is among the first ones that provides empirical evidence on the role of other loyalty programs in the context of co-operatives and member commitment.

When it comes to customer commitment and satisfaction, our results are consistent with the previous research on affective (e.g., Bansal, Irving & Taylor, 2004; Fullerton, 2011; Johnson et al., 2008) and continuous commitment and satisfaction (e.g., Wu et al., 2012) in that we found that satisfaction had a strong, positive impact on affective commitment and also a modest positive impact on continuous commitment. As regards members' commitment towards their

co-operative membership, in this case it seems that members consider the benefits and value to be so high that they are happy to continue the membership even though there are other options available in the market. Thus, the relationship is not based on “a must” (Meyer & Allen 1991), which is typical particularly when the options are low (Fullerton 2005). Instead, their affective commitment (which describes a voluntary based membership characterized by loyalty towards and identification with the company, Harrison & Walker 2001) is relatively high and members are willing to continue the relationship they have with their co-op. However, we also found that satisfaction had a small but significant negative effect on normative commitment, which contradicts the earlier findings on normative commitment and satisfaction (e.g., Bansal, Irving & Taylor, 2004; Meyer & Herscovitch, 2001). We believe that one explanation for this might be that when members are satisfied with the services provided by the co-operative, they see that membership provides both emotional and calculative value to them and want to continue their membership for these reasons, instead of being obligated to do so.

It also indicates that in the context of consumer co-operatives, emotional attachment and economic value are more important drivers for commitment than members’ obligation. Alternatively, they are unaware of the co-operative business model and co-operative ideology, in which case it is quite logical that they do not feel the need to commit themselves to co-operative membership. Nevertheless, to some extent this also contradicts earlier notions from the context of agricultural co-operatives, where sense of being part of a distinct collective that works against “*capitalists and business barons*” (Fulton, 1999, p. 423) and family and cultural socialization, organizational socialization and institutionalization of norms (Jimenez, Marti and Ortiz, 2010) have been mentioned as bases for member commitment. When taking the differences between the contexts of consumer and agricultural co-operatives into account, it is noteworthy that it might also be the case that in large retail groups members do not feel so obligated to remain its members as the loss of one member may not be so crucial as in smaller retail stores or in agricultural co-ops, where the amount of members is smaller and the participation shares for membership are much higher. Additionally, in the context of agriculture there are often fewer options available for members when compared to the context consumer co-ops. Overall, our study provides new insights into the effect of satisfaction on normative commitment, which has not been much empirically investigated in the retail sector (e.g., Fullerton, 2011). Moreover, these findings also highlight the importance of taking the context into account, when studying customer (member) commitment. That is, comparison of our findings regarding normative commitment from the context of retailing and consumer co-ops to the notions made in the context of agricultural co-operatives leads us to consider, whether normative commitment actually is even relevant concept anymore in retailing, as there often are many options available for the consumers and switching to another service provider is relatively easy.

Importantly, we found that familiarity with the co-operative business model has a positive strong effect on affective member-commitment and it moderates the effect of satisfaction and all three forms of commitment. Thus, those who are familiar with the co-operative business model have higher affective commitment towards their co-operative membership when compared to those unfamiliar with co-operation. This study also provides empirical support for earlier research in which it has been claimed that customer (member) ownership and co-operative principles and values (ICA 1995; Novkovic, 2008) and unique characteristics (Fulton & Adamowicz, 1993) would create additional trust and social capital (Spear, 2000; Tuominen, Tuominen, Tuominen & Jussila, 2013), which could then be sources of a stronger commitment

toward co-operative membership. Given the uniqueness of the co-op model in that it is solely based on patronage (members are owners, users/customers, decision-makers and sponsors of co-op operations), this is an important issue. That is, without committed members who actually use the services of the co-op, the existence of any co-operative would be brief and troubled. If we extend the discussion concerning the novelty of the results of this study beyond context, our findings lead us to believe that the company form and corporate purpose (e.g., co-operative business model or an investor-owned firm) should be noted as a factor that affects customer commitment. Thus, different kind of ownership structures and company values might play a role in customer commitment also in wider scale, as there are many kinds of service providers in retailing with different ownership structures and set of values (ie., investor-owned companies, family businesses, co-operatives) and these organizations and their customers may have different kind of value preferences, which might have an effect to their attitude towards corporate social responsibility, for example. Consequently, this is could also affect customer commitment and is something that future research on customer commitment in retailing should take into account.

5.1 Limitations and implications for future research

Our study has some limitations. First, as explained in section 4, a selection bias may arise from the procedure where the questionnaire was sent to the co-operative members who had given their permission for the co-operative to send e-mails to them and where the activity in responding to the questionnaire very likely correlated with how active they were in using e-mail. This may have out-selected certain demographic groups, such as senior citizens, from the survey. Therefore, although the respondents represent typical daily customers of the co-operative, the findings should be interpreted with some caution. Second, although we found that membership of other loyalty programmes played a part in the commitment to co-operative membership, our data lacks the possibility of making comparisons between the commitment to co-operative membership and non-co-operative retailing companies. Research design should be improved in future studies to mitigate selection bias and identify causal relationships more reliably. For example, the effect of co-operative membership on commitment could be considered as a treatment factor and non-members could be used as a control group. This would enable a more reliable verification of cause-effect relationships. Moreover, there is a need to study further whether the level of commitment is stronger in consumer co-operatives compared to other retail stores by using comparative analysis and a larger sample size.

Third, it should be noted that our case co-operative operates in a relatively sparsely populated area, which is likely to affect the amount of alternative service providers available for co-operative members. Moreover, the co-operative has powerfully highlighted it's company form in its marketing during the recent years and participated in regional development via its businesses and investments. Thus, these are aspects that might affect members' commitment and also their familiarity with the co-operative business model and future studies should investigate whether the results remain the same if the study is done in relation to some other context. For example, there are also co-operatives operating in the metropolitan area of Finland and we argue that this might have some implications for the results, as members' have much broader options available to satisfy their service needs and a co-operative is not such a powerful and visible actor in the regional economy. Additionally, Finland is often referred as the "most co-operative country in the world" when looking at the amount of co-operative

memberships. Therefore, future studies should include data from several co-operatives and preferably also from an international context in order to capture a more comprehensive picture of the phenomenon.

Fourth, it should be noted that when measuring members' familiarity with the co-operative business model we relied on their own assessment on the topic. Research so far has illustrated that members' awareness of the distinctive features of co-operative ownership (Jussila et al., 2012) and familiarity and understanding of the co-operative form of business is vague (Puusa et al., 2013). As noted by Jussila et al., (2012), members may not even consider themselves as owners as the participation share for co-operative membership is typically low (around 100€) and they evaluate ownership in terms of the amount of money invested. Thus, they may not even know that the benefit from co-operative ownership comes in terms of using the services provided by the co-operative, not in relation to the capital invested. Thus, even though they know S Group, they may not be able to say how it differs from competitors and is therefore seen as "just another shop". Therefore, we see that the results concerning familiarity should be interpreted with some caution and future studies should improve the measurement of familiarity with the co-operative business model in order to increase the reliability of the results.

Finally, in our study we focused only on members' commitment towards their co-operative membership. Thus, with this approach we are not able to illustrate members' actual buying behaviour as it comes to the question what do they actually do with their membership? For example, households are often loyal to different stores for different product categories (see Zhang, Gangwar & Seetharaman, 2017) and thus are members of several loyalty programmes (including the retail co-operative) and we did not investigate whether members are committed to their co-operative (membership) in product category A while at the same time being committed to competing store B in category two. This is something that future studies should take into account.

5.2. Managerial implications

Developing customer commitment is challenging as, for example, 65% of the members of our case co-operative have loyalty cards for other retail stores as well. However, based on our study, we argue that the relationship between a co-op and its customers, as well as factors affecting the relationship, are more complex and multifaceted in a consumer co-op setting (due to the unique characteristics of the co-op model). It seems that the company form and the corporate purpose do matter as those who were familiar with co-operation had higher affective commitment to their co-operative membership than those not familiar with it. Therefore, we see in addition to ensuring members' trust and satisfaction towards their co-operative (membership) by providing their members with benefits in terms of better products and services, consumer co-operatives should continue to engage in socially responsible activities in their regions, execute openness in their actions and decisions and encourage members to participate in the decision-making processes of co-operatives. With these actions, co-operatives not only execute their co-operative purpose, but increase members' familiarity with co-operation, which might then lead to higher level of affective commitment as well.

Moreover, with respect to the strategic management of co-operatives, we agree with Davis (2001) who maintains that co-operatives' "very competitive survival depends on having a committed management who understands co-operative purpose and values and can use them both to gain and utilise the co-operative difference as a competitive advantage (p. 30-31)".

This means that co-operatives should compete on their own strengths and differentiate themselves from their investor-owned counterparts and instead of camouflaging the presence of their supposed foundational values and principles (Heras-Saizarbitoria & Basterretxea, 2016), co-operation should be emphasized both in marketing and operation so that members can see that there actually is a difference between the co-operative they own and its competitors. While our study indicates members of our case co-operative seem to appreciate characteristics of the co-operative model and it can be used as a source of differentiation, it should be noted that while price is definitely an important factor in competition, the results of our study suggest that it is certainly not the only one and there are other features that related to co-operation are important as well. Moreover, since the operation areas of co-operatives' differ significantly from each other here in Finland, one national-level competitive strategy (e.g., competing mainly in terms of lower prices as done by S Group recently, cf. Puusa 2018) and ignoring the heterogeneity of operation areas and co-operative members and their values, is unlike to yield the best results.

When reflecting about these results beyond the context of this study, our findings support the view that corporate purpose and company values, for example, may affect customer commitment and this is something that managers of other (non-co-operative) retailers should also take into account. While members or a consumer co-operative are members for certain reasons, there are also reasons why customers of certain retailer are its customers, and we encourage these organizations to find out the preferences of their customers and put effort to responding to them. Even though this might seem as self-evident, the results of this particular study lead us to believe that each organization should rely on its own strengths when striving towards competitive advantage and customer commitment, instead of merely following the moves of its competitors and utilizing the same kind of strategies.

6. Conclusions

In this paper, we conducted a quantitative study in order to understand the effect of trust and satisfaction to affective, continuance and normative commitment in the context of retailing and consumer co-operatives. We also provided new empirical evidence on the role of familiarity with the co-operative business model and membership in the loyalty programmes of other (non-co-operative) retail stores as moderators in the relationships between trust and satisfaction and three forms of commitment. We have offered new insights into the discussion on customer commitment in retailing and taken organizations' different company forms, corporate purposes and values into account. Moreover, we have provided empirical evidence for the discussion related to co-operatives and member commitment, which so far has been to a great extent theoretical. Our results provided unique and interesting theoretical and practical insights into multiple phenomena and questions concerning customer commitment in retailing, which both mainstream organization and management scholars as well as co-operative scholars are puzzling over.

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*The Usefulness of Goodwill Information to Financial Analysts: A Qualitative Approach**

Hanna Silvola, Jan Mouritsen and Jari Huikku

Abstract

This paper investigates how financial analysts use goodwill information in their firm valuation. Analysts are disappointed with goodwill information because it does not seem to fit their valuation purposes. Interestingly, however, although the goodwill asset initially disappoints, it can become a catalytic asset, which helps mediate relations among other assets. Based on our field study findings, we suggest that aided by goodwill impairment testing information, analysts can conduct reflexive modelling to forecast the firm's future and develop an entity perspective on it. In reflexive modelling, analysts check their estimates about the valuation model's outcome against the firm's. As our main contribution, we extend prior literature about the usefulness of goodwill information for analysts by demonstrating how analysts use this information in reflexive modelling for firm valuation. We maintain that contrary to suggestions by scholars, goodwill accounting numbers are not necessarily ignored in firm valuation but can have economic significance for analysts.

Keywords:

goodwill, usefulness, impairment test, analyst, qualitative study

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1. Introduction

What do users do with financial accounting information? Users, such as analysts, investors, creditors, employees, and the general public, are typically described as having a significant interest in financial accounting. These types of users are often analysed as an institutional category to justify standard-setting practices (e.g., Durocher et al., 2007; Young, 2006; Durocher & Gendron, 2011) as those whose wants are identified via questionnaires (Gassen & Schwedler, 2010; Cascino et al., 2014), experiments (Anderson et al., 2015), content analysis (Demirakos et al., 2004), and interviews (Imam et al., 2008; Cascino et al., 2021; Durocher & Georgiou, 2021). This research attempts to formulate, in various ways, *what* users want from financial accounting. Financial accounting is often understood as knowledge input to decision-making, as evidenced by International Financial Reporting Standards' (IFRS) key objective of providing investors with reliable and decision-relevant information. Financial accounting must be reliable regarding calculative consistency (stability) and representational relevance (completeness) to be useful (Erb & Pelger, 2015; Power, 2010; Robson, 1992). However, what to "rely on" means is unclear. The values disclosed by financial accounting result from a mechanically objective process, which can account for all the steps that transform many receipts into financial values (Huikku et al., 2017; Porter, 1994; 1995; Power, 1996; 1997; Vollmer, 2007). However, this process is oriented towards producing a sign that the producers tolerate (Pentland, 1993) while saying little about the user *in persona*.

The user is an afterthought, and although it is possible that the user likes the idea of financial accounting being done via a mechanically objective process, this does not explain what users do with or to financial accounting. Users' engagement with financial accounting comes post-production. Thus, it is reasonable to ask the question already posed by experimental and survey-based research about users' feelings about financial accounting more directly, namely, how – rather than whether – they use financial accounting information (Kalthoff, 2005; Knorr-Cetina, 2010). This theme raises a specific concern about the relationship between financial accounting and its users: What happens when users mobilise financial accounting, are mobilised by financial accounting, or both? We investigate this phenomenon in the context of goodwill accounting and pose the research question: *How do financial analysts' use goodwill information in firm valuation processes?* In addressing this question, we are specifically interested in the role of valuation models in these processes. Durocher and Georgiou's (2021) study is an exception within this field. They employ framing theory and draw on interviews to analyse how analysts make sense of goodwill accounting information compared to standard setters. However, compared to the work of Durocher and Georgiou (2021), our paper builds a more process-oriented approach and does not ask what analysts want but rather attempts to illustrate how analysts use financial accounting.

In some sectors, goodwill is often the largest item on firms' balance sheets (Cascino et al., 2016) and one of the most difficult assets for analysts to value. As a level three asset, goodwill is calculated by a valuation model based on net present value (Bougen & Young, 2012; Hartmann, 2021). In principle, this model would speak equally to firms and analysts (and, by implication, other stakeholders) who would all, IFRS claims, be interested in such information for decision-making purposes. Goodwill impairment testing (GIT) is potentially valuable for analysts because when all the tested cash-generating units are added up, such can indicate

¹ In our paper, financial analysts (also referred to as analysts) include sell-side analysts and buy-side analysts (e.g., portfolio managers, fund managers, and other investors).

the discounted cash flow (DCF)-based valuation for the whole firm. Hence, GIT is analogous to a company's DCF valuation – the method financial analysts use most. Nevertheless, Durocher and Georgiou (2021) find that analysts ignore goodwill assets and impairment expenses in their valuation model and rarely use the release of goodwill information to adjust their future cash flow projections. Likewise, Schatt et al.'s (2016) literature review concludes that goodwill impairment information is often disclosed in the notes but does not convey new private information, making it irrelevant in helping analysts revise their cash flow expectations.

Prior quantitative literature has provided partly contradictory findings regarding goodwill impairment information's usefulness (e.g., Hamberg & Beisland, 2014). Cascino et al. (2016, 71) suggest that decision usefulness and representational faithfulness of goodwill information for firm valuation to analysts are considered inferior to other financial accounting information.² It remains open to studying the implications of such a view for actors' decision-making activities. This research gap is also documented by the recent comprehensive literature review by Amel-Zahed et al. (2021, 23-24). In our study, we respond to their urge 'to use non-archival data such as case and field studies to enhance our understanding of how goodwill information is processed by analysts, investors and other users'. Our data are primarily based on interviews and discussions with prominent financial analysts in Finland.

For two reasons, analysts may be able to pay at least some attention to goodwill information. First, the information may be incomplete and insufficient and, therefore, difficult to understand. However, because of this trait, it may also become a source of competitive advantage among analysts because it might contain information difficult to decipher. Second, many companies have goodwill values that comprise more than the rest of the asset values on their balance sheet, which may require analysts to at least form a view of the risks associated with goodwill regarding potential impairments. Thus, analysts may be interested in using the goodwill information in some way, but which way(s)?

Our investigation draws on research in the sociology of finance, where attention has been paid to the intensive work that happens when analysts seek to arrive at the price of an asset or liability (Antal, Hutter, & Stark, 2015; Beunza & Stark, 2004; 2012; Jarzabkowski et al., 2015; Knorr-Cetina, 2010; 2011). Research in the sociology of finance embraces the socio-materiality of valuation. It synthesises the calculative activities of the analysts with sociological perspectives (Imam & Spence, 2016) and casts light on the social and cultural constitution of capital markets (Zaloom, 2003). Value is considered an outcome of the interplay between people, text, technology, and other things.

Our analysis mobilises the notion of reflexive modelling (Beunza & Stark, 2012) within the sociology of finance literature and uses it as a method theory to contribute to a domain theory (Lukka & Vinnari, 2014), i.e., the set of knowledge about the use of financial accounting, particularly goodwill information, in analysts' valuation work. Reflexive modelling is a way for analysts to inquire into the validity of their calculating instruments. Following the conception of reflexive modelling, we address the way analysts deploy DCF models to check and compare their estimates about the model's critical components against the firm's. This benchmarking occurs in private dialogues with the firm's managers and considers available public information. An empirical example of the reflexive use of GIT information is an analyst's meeting with

² Similar results can be found in Cascino et al. (2021), who characterise the usefulness of financial accounting information as consisting of relevance and representational faithfulness. Relevance can be defined as the ability of information to influence decision-making, assuming the information is faithfully represented. Information is considered faithfully represented if it is complete, neutral, and error-free (International Accounting Standards Board, 2018).

the company management, where the analyst poses questions inspired by their GIT recalculation and interprets the management's reactions. A dissonance in estimates prompts doubt and stimulates additional searching to evaluate the company's target value. Embedding social cues to traditional financial information seems to be demanding and challenging for financial analysts, but reflexive modelling helps build a competitive edge because of unique target price estimates and the added value provided to their final customers.

As our main contribution, we extend existing literature about the usefulness of goodwill information for analysts. More specifically, we add nuance to the literature by suggesting that – largely contrary to previous suggestions (e.g., Durocher & Georgiou, 2021) – analysts do not necessarily ignore goodwill information in a firm valuation. Goodwill may have economic significance for at least some analysts. When analysts use goodwill information, they understand it is also a challenge the firm poses to the analysts, who must determine what happens in the firm. We identify three different practices of analysts' use of goodwill and GIT information. Two of these practices conduct recalculations of GIT on purpose: One uses a different model; another uses the same model for a firm valuation. The third does not conduct a GIT separately but uses the results of the standard firm valuation calculation to assess goodwill's appropriateness.

We also add to the financial accounting literature by introducing the concept of reflexive modelling (Beunza & Stark, 2012). We demonstrate ways analysts initially use reflexive modelling with their calculations vis-à-vis the information the firms provide and then communicate with the management about the outcome of their recalculations. By reflexive modelling, analysts seek to solve the dissonance between their and the firms' seemingly irreconcilable numbers.

The paper proceeds as follows. In the second section, we review prior literature. In the third section, we describe our empirical research material and setting, and we elaborate on the methods of data collection and analysis. In the fourth section, we analyse our empirical data. In the fifth section, we present the concluding discussion.

2. Literature

In this section, we will first review prior literature regarding goodwill as an asset and its value relevance. Then, we present analysts' use of accounting information in their firm valuation work. Finally, we discuss our study's theoretical underpinnings.

2.1. Goodwill information and its value relevance

IFRS intends to promote more useful information to analysts by producing (more) future-oriented values that would be directly relevant to decision-making (Georgiou, 2018; Georgiou et al., 2021). Goodwill is a particular asset in the balance sheet because it is not separate but a left-over from allocating a purchase price to other assets (see in-depth description in Appendix 1). Goodwill emerges in business combinations (e.g., mergers and acquisitions) when an acquirer pays over the value of identifiable net assets of the acquiree. The companies with goodwill must carry out, at least annually, a goodwill impairment test to ensure their goodwill is carried at no more than its recoverable amount. Firms typically use the 'value in use' (i.e., the present value of the future cash flows, DCF) method for this testing. Notably, the impairment testing simultaneously values the whole firm when all the tested cash-generating units are added up.

Mainstream quantitative value relevance research has shown that goodwill impairments are associated with market value. Studies in the US SFAS 142 context commonly (but not always) suggest that news about impairments reduces market value (e.g., Hirschey & Richardson, 2002). Hayn and Hughes (2006) also found that although impairment news was informative, managers had delayed reporting write-offs. Also, Bens et al. (2011) found a significant adverse market reaction to unexpected goodwill impairments but suggest this reaction is moderated if the firm has many analysts following it. Jarva (2009) found that Goodwill write-offs are associated with future expected cash flows, but this association appears to be insignificant for firms with contemporaneous restructuring. According to Li et al. (2011), investors and analysts reduce their earnings forecasts in connection with impairment loss announcements. Ayres et al. (2019) found that the likelihood of goodwill impairment more strongly relates to an expected impairment when analyst coverage is higher.

Outside the US, in the IFRS (IAS 36) context, Hamberg and Beisland (2014) found that in Sweden, impairments reported in addition to amortisation were significantly related to stock returns before IFRS 3. However, impairments were no longer connected to stock returns under the impairment-only regime. In Portugal, Oliveira et al. (2010) investigated the value relevance of impairment losses and indicated that IFRS adoption had increased goodwill's value relevance. They suggest this is because the goodwill impairment test is associated more with market prices and is evaluated more realistically by investors. Also, Knauer and Wöhrmann (2016) show that market reactions to goodwill impairments are associated with the level of legal protection. They show that there are greater absolute price reactions in common-law countries where strong protection limits the benefits to managers who exert their discretion opportunistically. Knauer and Wöhrmann (2016) precisely address two dimensions that may determine investors' perceptions of impairments' reliability: the level of investor legal protection and the verifiability of the impairment information. Thus, their findings suggest that an impairment loss can convey valuable information. However, investors' evaluations depend on the reporting environments' characteristics. Based on their archival study, Chalmers et al. (2012) suggest that adopting the IFRS goodwill impairment approach conveys more helpful information to analysts than the former straight-line amortisation approach, improving analysts' forecast accuracy. Furthermore, Amel-Zahed et al. (2021) suggest in their recent literature review that goodwill from acquisitions is consistently reported to be value-relevant and that goodwill impairments are informative and have predictive value to investors (see also d'Arcy & Tarca, 2018), especially where local standards deviated more from IFRS (Aharony et al., 2010).

The researchers generally agree that value relevance is associated with firm- and country-level institutional factors (see d'Arcy & Tarca, 2018; Schatt et al., 2016). Wen and Moehrlé (2016) suggest in their literature review that the goodwill impairments also relate to the firms' information environment (i.e., high versus low asymmetry), cost to the firm conducting the impairment test (usually higher for smaller firms), and the firm's prior performance (e.g., returns on assets).

2.2. Analysts' use of accounting information in their valuation work

Mainstream accounting and finance literature reports that analysts and investors find financial reporting information highly useful for valuation purposes (e.g., Asquith et al., 2005; Cascino et al., 2021; Gassen & Schwedler, 2010). Specifically, they prefer information that helps them forecast future cash flows and understand the business (Cascino et al., 2021). Analysts appear

to focus much more on information in the income statement, considering it more relevant than balance sheet items in estimating future cash flows and associated risks (Cascino et al., 2016). Analysts do not just mechanically rely on their models' outputs when giving investment recommendations or making buy/sell decisions (Abhayawansa et al., 2015; Asquith et al., 2005; Brown et al., 2015, 2016).

Analysts and investors commonly employ various earnings-based models, such as price/earnings (P/E) ratio and EV/EBITDA (Huikku & Pöyhä, 2020; Imam et al., 2008). Barker (1999) suggests that analysts' tendency to adopt a short forecast horizon (i.e., relative methods) relates to the inherent uncertainty of future outcomes. As well as relying on multiples, investors and analysts use increasingly more DCF models (Abhayawansa et al., 2015; Imam et al., 2013). Demirakos et al. (2004) and Glaum and Friedrich (2006) report that analysts and investors consider DCF more important than multiples in firm valuation, typically using several methods simultaneously (Abhayawansa et al., 2015). In estimating the cash flows and risks, analysts and investors make macroeconomic, industry, and strategic considerations and use their subjective judgment (e.g., Glaum & Friedrich, 2006; Imam et al., 2008).

Prior mainstream studies about analysts have used quantitative data heavily and focused on analysts' outputs, namely, estimates and predictions (Bradshaw, 2011; Ramnath et al., 2008). Specifically, the studies address the accuracy and dispersion of these forecasts. Prior scholars suggest that analysts' forecast accuracy increases with new information (e.g., Bowen et al., 2002). Further, regarding the association of analysts' valuation model choice and their price target accuracy, Gleason et al. (2013) found that accuracy improves when analysts use a residual income valuation over the PE growth approach.

Despite the voluminous studies in the area, Bradshaw (2009, 2011) suggests we still know too little about what analysts do in practice, i.e., how and why they process data to produce their forecasts, derive their target prices, and give their recommendations. Recently, however, scholars have sought to enhance our understanding in this field, opening the 'black box' of analysts' work. Consequently, based on their content analysis of conference calls and analysts' research reports, Bischof et al. (2014) suggest that analysts use calls to request fair value-related information and that their questions are positively associated with the information's impact on accounting metrics. Abhayawansa et al. (2015) suggest that intellectual capital plays a major role in analysts' work, affecting setting price targets, forming a perception of the firm, selecting the valuation model, and supporting analyst-client communication. Yin et al. (2016) further addressed how analysts obtain PE multiples for firm valuation. Brown et al. investigated sell-side (2015) and buy-side analysts' (2016) work using surveys and interviews. Sell-side analysts emphasise private communication with management as a major input in their decision-making. By using information from direct management contacts, analysts can better contextualise and add meaning to accounting data, aligning with Barker et al.'s prior findings (2012; see also Aharoni et al., 2017, and Cascino et al., 2013, 2016, for a review). Brown et al. (2015) also suggest that issuing earnings forecasts and stock recommendations below the consensus can increase analysts' credibility. In their 2016 paper, they found that sell-side analysts add value to buy-side analysts, specifically with their industry knowledge and access to company management.

With regard to the role of goodwill information in analysts' work, a few studies address the users' processing of it. The message of these studies is somewhat contradictory to the value relevance literature presented above. Based on their literature review, Schatt et al. (2016) conclude that goodwill impairment information disclosed in the notes often does not convey new private information. Hence, this information is irrelevant to helping analysts revise their cash flow

expectations. Similarly, based on their survey, Cascino et al. (2016, 71) suggest that decision usefulness and representational faithfulness of goodwill information are considered lower than other financial accounting information by analysts and investors. Cascino et al. (2021) report similar results in their study based on face-to-face interviews with experienced investment professionals. Andreicovici et al. (2020) highlight that the transparency of goodwill testing information matters. They show that when disclosure relating to goodwill impairment tests is more transparent, disagreement among analysts and between analysts and managers is significantly lower. However, they also conclude that the inconsistent application of IAS 36 and the boilerplate nature of the associated disclosure result in varying degrees of disclosure quantity and quality. This can lead to disagreement, creating concerns about the appropriateness of impairment, as opposed to amortisation, on goodwill.

A study by Durocher and Georgiou (2021) appears to be the only qualitative study addressing analysts' use of goodwill information. They use the 'framing' concept as a heuristic to explore how analysts perceive goodwill accounting and how they make sense of its use and usefulness vis-à-vis standard-setters. They find that analysts ignore goodwill information in their firm valuation analysis because the existing goodwill accounting practices do not provide the needed information to assess each acquisition's performance and evaluate whether projected synergies have been realised. According to their study, analysts appear to strip out the goodwill asset and the impairment expense from their analyses to get closer to their own view of economic reality, rarely using the release of goodwill information to adjust their future cash flow projections.³

According to IAS-36, firms are mandated to disclose managerial explanations about the recognition of an impairment and information about cash flow forecasting methods, discount rates, and terminal value assumptions. Compliance with these requirements has been reported to differ significantly, affecting analysts' and investors' ability to estimate the amount, timing, and uncertainty of firms' cash flows (e.g., Andreicovici et al., 2020; Baboukardos & Rimmel, 2014; Glaum et al., 2013, 2018).

2.3. Analysts' use of valuation models

In our paper, we are interested in how analysts use goodwill information in a firm valuation, and specifically, their use of tools (models) in these processes. Our research approach to analysts' work draws on a great deal of existing research in the sociology of finance that synthesises the calculative activities of the analysts with sociological perspectives (see also Imam and Spence, 2016) and aims to understand how capital markets are socially and culturally constituted (Zaloom, 2003). In this approach, attention is paid to the intensive work that happens when analysts attempt to come up with the price of an asset or liability (Antal et al. 2015; Benza & Stark, 2004; 2012; Jarzabkowski et al. 2015; Knorr-Cetina, 2010; 2011).

In the sociology of finance, theoretical arguments have been made regarding financial analysts (Preda, 2007). These arguments emphasise the central agential role of economic technologies (i.e., theories, software, hardware) to act as tools of active intervention rather than mere representations in analysts' work (Callon, 1998, 2004; MacKenzie & Millo, 2003; Muniesa et al., 2007). Hence, the social studies of finance embrace the socio-materiality of valuation. Value is an outcome of the interplay between people, text, technology and other things, and the studies

³ However, analysts may perceive goodwill information as marginally decision useful for stewardship purposes, i.e., they may use it to adjust their view of management (Durocher and Georgiou, 2021).

often focus on analysts using a model. For example, MacKenzie and Millo (2003) examined the role and performativity of the Merton-Scholes-Black formula for computing the price of derivatives and how this mobilises the expertise of social groups.⁴ Hence, in these contexts, analysts want to create knowledge by experimenting with the tools and algorithms. Moreover, Kalthoff (2005, p. 71) shows in his paper how people ‘calculate with something, instead of calculating something’.

Prior studies have predominantly addressed how analysts work in their offices or trading rooms (Bruegger & Knorr-Cetina, 2000). This literature suggests that checking only the official public reports is insufficient for an analyst. Rather, an analyst must be out on the streets as a kind of detective, i.e., participating in companies’ analyst conferences, being in contact with IR officers, CEOs, and CFOs, and visiting headquarters and production sites (Knorr-Cetina, 2010; Wansleben, 2013). Knorr-Cetina (2011) further suggests that financial analysis is a kind of proxy science that can consist of performance proxies, proxy projections, proxy ethnography, and proxy detection.

The problem is that analysts do not know the value of a share price because they would have to know the future. Given that they do not know the future, they handle tools instead. However, these tools are imperfect renderings of the future. Therefore, using tools is a task or problem more than an outright solution, conveying the concern for making tools while also developing knowledge about an issue that is understood to be imperfectly understood. The tools are media for gaining knowledge and experimenting with developing knowledge (Callon, 1998, 2004). Thus, tools are mechanisms for thought, just as thought triggers changing and developing tools. Hence, in our case, analysts work with the objects (Kalthoff, 2005), leading us to draw further on the notion of reflexive modelling (Beunza & Stark, 2012). Analysts try to complete their work by searching for more material through reflexive modelling. We address the ways analysts search for material for their modelling beyond conventional accounting statements. By moving to reflexive modelling, we focus on the uncertainty and randomness of collating information, which can be difficult to make commensurate from statistical information through rumours and hearsay. This checking occurs in private dialogues between the firm managers and the analysts while considering available public information. In our study, we use Beunza and Stark’s (2012) conception of reflexive modelling as our method theory (Lukka and Vinnari, 2014) to study analysts’ use of goodwill information. Reflexivity refers to circular and bidirectional relationships between cause and effect, especially as reflexivity is embedded in human belief structures.

Originally, Beunza and Stark (2012) identified a new socio-technical mechanism that results from using financial models. They write that traders ‘do not use models only to develop their own estimates of relevant variables. Crucially, they [traders] also deploy models to check their own estimates against those of their rivals. Thus, in place of models versus social cues, we observed traders modelling social cues. We refer to this practice as reflexive modelling (p. 384).’ Beunza and Stark (2012) argue that reflexive modelling offers traders significant benefits by giving them a way to utilise the work of their rivals (p. 385). In our case, the ‘rivals’ are company management to whom analysts benchmark their own recalculations.

In our investigation of reflexivity in valuation work, we are interested in the ways analysts deploy DCF models to benchmark their estimates with the information the company provides,

⁴ Other studies about how people work with tools/objects exist. These objects can include planning/designing models (Ewenstein & Whyte, 2007, 2009; Öygür, 2018), strategy objects (Kaplan, 2011; Werle & Seidl, 2015), arts markets (Coslor & Spaenjers, 2016), and collaborative objects (Nicolini, 2011; 2012).

and the reflexive nature of goodwill information when analysts define their target share price. Beunza and Stark (2012) suggest that reflexive modelling is largely based on dissonance; the dissonance in estimates between analysts and the firm prompts doubt, stimulating a further search to evaluate the company's target value. In other words, the driving force of this reflexive work is analysts' sense of dissonance based on seemingly irreconcilable numbers (Arjalies & Banzal, 2018). In our study, dissonance arises from an information asymmetry between management and analysts: a company's management publishes limited GIT information in notes of the financial statement, and analysts try to value a company based on this information. Due to the socio-technical character of goodwill impairment testing (Huikku et al., 2017), it could be expected that the goodwill information might mediate the message through the analysts to the financial markets. In goodwill's case, economic cues impact goodwill calculation, affecting the valuation and the stock market's price further. Goodwill can build a feedback loop which, again, impacts economic cues. Thus, goodwill is unstable, and its movement between social relations and technical tools makes it incomplete and doubtful.

To summarise, prior literature has provided partly contradictory findings on the relevance or usefulness of goodwill impairment information. Also, previous literature has drawn on quantitative approaches; the only more in-depth probing qualitative study on users' processing of goodwill information is the one by Durocher and Georgiou (2021). Consequently, we lack an in-depth understanding of analysts' use of goodwill impairment testing information for their firm valuation work. Our study will address this phenomenon by employing the concept of reflexive modelling as our theoretical lens. The need for more qualitative goodwill impairment research to better understand analysts' and investors' perceptions and processing of goodwill-related information is also urged by Schatt et al. (2016) and Amel-Zadeh et al. (2021).

3. Empirical method

Our study addresses analysts' work – specifically, their use of goodwill information in firm valuation. The set of knowledge on this substantive topic area is our domain theory (Lukka & Vinnari, 2014). We use reflexive modelling (Beunza & Stark, 2012) as our method theory to produce a contribution to a domain theory. We mobilise the method theory primarily to illustrate that it will be useful in offering insights as a theoretical lens in a context in which it has not previously been employed (Lukka & Vinnari, 2014).

The data gathering is primarily based on interviews with Finnish analysts. The focus of the interviews was the work in which they were involved: using and analysing financial values of goodwill assets and goodwill impairment tests, i.e., future-oriented IFRS numbers. Finland provides a unique and suitable empirical setting to examine the fundamental change in goodwill accounting because adapting IFRS has significantly changed accounting practices for Finnish firms (i.e., from a rule- to a principle-based system), and Finnish listed companies have commonly high goodwill values on their balance sheet (e.g., KPMG, 2011). During empirical data collection (2010–2019), goodwill impairment testing (IAS 36) was still a relatively new way (implemented in 2005) to accommodate certain types of intangible assets associated with business combinations when businesses are acquired or merged. As the Financial Supervision Authority (FIN-FSA) (2009, 2014) reported, the quality of reported goodwill impairment testing information has improved since IAS 36 was initially introduced in 2005. However, lots of shortcomings and variations in the reported information still exist.

Considering the study's purpose to cast light on analysts' use of goodwill-related accounting information in a firm valuation, we use a cross-sectional field study method, which lies

somewhere between an in-depth case study and a broad-based survey (Lillis & Mundy, 2005). Lillis and Mundy suggest that a cross-sectional field study can be particularly appropriate when doubt exists about the precise specification and measurement of variables, their empirical interpretation, or the relationships among them.

Our data gathering was primarily based on 34 semi-structured interviews that took place between August 2010 and June 2019 (22 interviewees). These interviews resulted in 24 hours of tape-recorded and transcribed data (see the interviewees in Appendix 2). First, we interviewed 12 sell-side analysts, eight buy-side analysts, and two business managers closely involved with goodwill and analyst-related aspects to enhance our understanding of the phenomenon from their perspective.⁵ All but two interviews were face-to-face. The themes of these interviews focused on the valuation of intangible assets, analysts' experience and knowledge of goodwill and its impairment testing, and decision usefulness of goodwill information in valuation situations. Specifically, we focused on analysts' use of goodwill information (goodwill assets and goodwill expenses) in their valuation modelling and other valuation work. The generic interview questions for these interviews are in Appendix 3.

Second, we conducted 12 shorter telephone interviews with the analysts who considered GIT information in their valuation work to clarify certain aspects about using goodwill in their valuation work and discuss other interesting aspects that emerged during our data analysis. We found these follow-up interviews an invaluable source of information, further enhancing our understanding of financial data usage. Analysts' answers in the follow-up interviews were congruent with the initial interviews. Particularly, this material makes it possible to show the reflexive use of financial accounting information.

All interviewees are prominent and experienced in their field; one analyst also represents the Finnish Society of Financial Analysts. The major selection criteria for analysts were their knowledge about goodwill and that they follow and value the interviewed 12 companies with high goodwill value in their balance sheets. This selection method enabled us to pose deeper probing and company-specific valuation questions about the reflexive use of goodwill information. Some analysts confidentially shared their original data sheets and valuation formulas, explaining the details of their valuation method in-depth. We used financial material the companies and analysts published as our secondary data source. Seeing the confidential goodwill impairment testing material that some interviewees revealed to us was very useful. We also used relevant material from newspapers, magazines, and analysts' blogs. Recent writings in media have used titles such as 'Goodwill became problem waste', 'Company X is the goodwill bomb of the stock exchange', 'Goodwill clatter can diminish dividends', 'Goodwill bombs will start to explode', and 'Goodwill is air for all the money – Watch out for these companies', indicating the topic's relevance within the larger business audience.

Regarding data analysis, we transcribed and preliminarily analysed the interview material without delay. After that, we divided the data according to themes and sub-themes and then selected the most relevant themes for further analysis (Creswell, 2014). During the process, we read and reread the material, compiled and updated various spreadsheet tables and figures describing the findings, and discussed our interpretations with other research group members. Our thematic approach enabled us to analyse within- and cross-case patterns regarding analysts' reflexive modelling.

⁵ As well as these two firm interviews, we interviewed 12 more business managers in ten companies with a lot of goodwill to enhance our understanding of their goodwill reporting. The sell-side analysts interviewed specifically followed these 12 firms. Moreover, we interviewed other actor groups, such as creditors, auditors, financial supervisory authorities, academics, and media, for our other research project about goodwill accounting. Altogether, the interview data consist of 73 semi-structured interviews with 61 interviewees.

4. Use of goodwill information: Empirical evidence

This empirical section consists of three subsections: In Subsection 4.1, we present what companies disclose related to goodwill and also analysts' views of the relevance and sufficiency of this information. In Subsection 4.2, we show that although analysts were disappointed with goodwill data, they understand it may contribute to a company's valuation. Finally, in Section 5.3, we demonstrate analysts' reflexive use of goodwill information for valuation. Our empirical evidence shows that goodwill impairment information generates information asymmetry between a company and the analysts following it, along with tremendous disbelief and feelings of betrayal that this information can ignite interest and experimentation during reflexive modelling. The analysts' ultimate target is to define the target share price based on the DCF. However, they initially find public GIT disclosures unhelpful.

4.1. Disappointment with the published goodwill information

In IFRS, fair value accounting annual impairment tests replace straight-line depreciation for goodwill. In Finland, goodwill largely contributes to listed companies' book values. According to a report by the Financial Supervisory Authority (hereinafter FIN-FSA), in acquisitions made by Finnish listed companies in 2008, up to 53% of the purchase price related to goodwill (FIN-FSA 2009, 31), for example. At the time of the study, the average amount of goodwill in Finnish listed companies was about 20% of their total assets. Goodwill has gained major attention in Finnish media, and its uncertainties are regularly documented with titles such as "The goodwill bomb is ticking in many listed companies" and "There is a lot of air for sale at the Helsinki Stock Exchange". Accordingly, goodwill could be expected to have a significant role in financial decision-making, investor relations, and market values.

The new goodwill impairment practice challenges many actors, including business managers, auditors, and financial analysts. Analysts would like companies to disclose all the goodwill impairment testing's relevant parameters (e.g., cash flows per CGU, WACC, growth rate, terminal value) to support their firm valuation. However, they do not disclose these parameters comprehensively, as Analyst 8 describes:

"What parameters have been used in the test? We have no idea about the details or the assumptions used in the test. We have no clue about them" (Head of Trading and Capital Markets, Analyst 8).

Is the situation as indefinite as the analysts claim? What can actually be seen from the notes? According to the analysis of GIT disclosures of the large- and mid-cap companies at the Nasdaq OMX Helsinki Stock Exchange in 2010, the Finnish listed companies disclosed insufficient information on GIT in their financial reports. Companies appeared to disclose a wealth of information on the technical issues of the testing process, such as a testing method, growth rate, and discount rate. This information is often relatively standardised in the industry, and all companies follow their industry peers (Huikku et al., 2017). Thus, this information does not

provide unique information to analysts because companies disclose similar text and figures.⁶

Basically, analysts would like to see more explicit material in companies' disclosures, as Analyst 4 explained:

"Analysts begin to ask what kinds of assumptions they [companies] have used. Some of the companies give relatively much information about the parameters behind the calculations. However, I think that reporting should be more transparent. An ideal situation would be that an analyst or investor could himself/herself conduct a simple DCF calculation with those published parameters and verify that same result. If the knowledge [about the assumptions/parameters] is located only at the firm, you have information asymmetry, and this is always a bad thing" (Portfolio Manager, Analyst 4).

Analysts were acutely aware there would have to be a limit to transparency. However, since linking the scraps of information about goodwill impairment testing and the numbers systematically appearing in the balance sheet was impossible, goodwill numbers were opaque and ambiguous, a constraint that created a key paradox for analysts, as Analyst 2 explained:

"I certainly understand that firms cannot publish their estimates of absolute cash flow numbers. These issues are too sensitive, in my opinion. Of course, they can give us WACC figures, but I think they are too superficial and calculated quite haphazardly. If they don't give us [details of] cash flows, it is natural that I won't be quite reassured" (Head of Strategies, Analyst 2).

Something about the whole institution of IFRS-based financial accounting is not reassuring, namely that it is impossible to do what it claims transparently (Durocher & Georgiou, 2021; Lev, 2018). Analysts would have "their ideal worlds" where they could see cash flow estimates and employed discount rates for each business segment. However, this "ideal" world would quickly be compromised by another supposedly "real world," where it is impossible for "firms to publish their estimation of cash flows". There is a "real world" where firms compete and must hide their knowledge from the capital market. Therefore, IFRS create disappointment, and the goodwill information in notes to the financial statement or via separate press releases in connection with write-downs raises more questions than gives answers, as Investor 2 claimed:

"I hope there will be stricter rules about reporting on goodwill impairment testing. Now the problem is that this information just generates questions that remain unanswered. It would be very informative to know more about the testing" (Portfolio Manager, Investor 2).

⁶ FIN-FSA continuously supervises the goodwill-related enforcement of Finnish companies. In particular, the enforcement work has focused on the basis for values of future cash flows, determination of the discount rate, and the notes to the financial statements. Although IFRS was introduced in 2005, in 2009, FIN-FSA reported that almost 20% of the companies do not disclose information on sensitivity analyses, stating that "the sensitivity analysis data of the impairment tests provided by several companies were not sufficiently informative" (FIN-FSA, 2009, 10–11). Still, in 2014, FIN-FSA reported significant shortcomings in goodwill-related disclosures: "Companies use many standard phrases in the notes to the financial statements. This means that the notes contain boilerplate phrases from IFRS standards or model books but very little company-specific content. FIN-FSA has also noted the scarcity of information in the notes" (FIN-FSA, 2014, 2).

What was hoped to provide transparency about the firms produced scepticism. Since the provided information made analysts clueless, it became a black box that made its operations incomprehensible, as Investor 4 suggests⁷.

“Because of this, [goodwill] valuation practice is a black box for the investor. You can never know exactly how they do the testing: what kind of practices they use, what parameters they use... Well, there is no doubt that the critical investor will start to think that there might be a chance that this will have an impact on the [estimated] outcome” (Head of Equities, Direct Equities, Buy-side Analyst 4).

As well as the incomplete information on GIT, analysts are suspicious about whether companies have conducted GIT with integrity. Analyst 4 says:

“It [reported information] is understandable. If it [recognition of impairment] is published, the sentence, “we have recognised a goodwill impairment of this amount”, in the report will be understandable. You understand what it means and what the consequences are. However, I come back to that [subjectivity] and start to wonder how they came to that specific amount. Could it be – if they report amortisation of 50 million – could it be 150 million euros? If so, I suspect there may be a need for a larger amortisation than published. It would be useful to get those [detailed] parameters” (Portfolio manager, Analyst 4).

There was a general and a particular scepticism. The former concerned the institution of IFRS in that the future must be considered, which would be counterintuitive to analysts. The scepticism concerned subjectivity so that managers would be expected to talk for themselves and not the future. Analysts would claim that managers can be opportunistic and create the numbers they prefer. Analysts were unsurprised that earnings management would not only be possible but likely because, as explained, goodwill calculations were based on discounted cash flows, which were notoriously ambiguous, as Analyst 4 explained:

“Everyone who has done discounted cash flow calculations knows how to manipulate them to show desired figures. Of course, a qualified checker who knows this game-playing can also see what has been done. If you have the parameters [for the goodwill calculation], you can assess the figures and make your own calculation. However, if you are not given the parameters, it gets difficult. You need a lot of parameters to compare similarly as the company has done” (Portfolio Manager, Analyst 4).

A dissonant view seems to exist between management and analysts about the correctness of financial estimates, which arises from an information asymmetry because the disclosed infor-

⁷ The usual misunderstanding among users of financial information relates to the buffer of goodwill value. The buffer means that the recoverable value is higher than the carrying value on the balance sheet; thus, there is no need for a goodwill write-off. Financial markets are not typically aware of the buffer's amount (the difference between recoverable value and carrying value). However, these markets can try to estimate this amount if the firm reports very detailed sensitivity analyses. A buffer in goodwill is one reason for the lack of goodwill write-offs during the recession, causing much confusion and mistrust among analysts. The situation looks totally different from the management perspective: Managers may try to avoid writing goodwill off as long as possible because the write-off decision is irreversible. If a company's management hastily writes off goodwill with too many loose arguments (i.e., a short-term change in the business environment, which would be repaired later on), financial markets interpret this behaviour as the management being incapable of managing the firm. Thus, the unnecessary write-off is even worse than the delayed one. Managers will simply lose face if they write off goodwill too hastily.

mation on GIT is inadequate in the financial report and its accompanying notes. Thus, analysts must try to complete the puzzle by putting the pieces of available information together and finding the remaining pieces.

4.2. Reintroducing goodwill by analysts

Even if analysts and investors were disappointed with GIT, they could not quite let it go. Even if they were generally sceptical about IFRS, they endorsed their approach to taking on discounted cash flows, as a portfolio manager (Buy-side Analyst 2) suggested:

“With regard to company valuation, we use the discounted cash flow model as the primary method. In this context or methodology, historical costs, such as too-high prices paid for acquisitions, do not have any effect on the net present value of the cash flows and, hence, do not affect the value of the company.”

Goodwill would be a sunk cost. Therefore, cash flows would disregard acquisition costs. However, there would be exceptions since goodwill was part of the balance sheet, impacting financial ratios. The higher the goodwill, the higher the bankruptcy risk. A managing director (Buy-side Analyst 3) explained it this way:

“If you have little goodwill, it is not a problem. However, if you have a lot of it, an extreme situation, and a firm in trouble, it will become the biggest issue in the world. Then I would connect it to the risk of bankruptcy.”

When a company had to write off goodwill, ratios related to equity (solidity, profit distribution) and debt contracts (covenant violation), issues about a company's solidity would develop:

“Then it [goodwill impairment loss] hits the equity, of course. You make losses and lose your equity, and this may affect your capacity to pay dividends.” (Senior Vice President of Finance, the Company 1) and “And regarding this impairment loss, if a company can manage it without a winding-up situation, it has an effect on profit distribution. A company may suffer because it cannot pay dividends” (Executive Vice President & CFO of Company 2).

So, even if goodwill sank, it would still be on the books and could influence covenants based on a company's profitability or solidity, which could affect the cost of capital. Such an increased cost of capital would decrease the value of discounted cash flows and, thus, the company's value:

“Then a company can have a syndicated loan with covenants connected to P&L and a balance sheet. If a company recognises a goodwill impairment loss and decreases the equity accordingly, this may influence key figures and increase an investor's required rate. Hence, the interest rates of a company increase, and the free cash flow will decrease in the discounted cash flow analysis” (Portfolio Manager, Buy-side Analyst 2).

Thus, goodwill values were not quite sunk non-cash flow items. The goodwill asset and impairment expenses could not just be stripped from the models and analyses and forgotten

since they would still be relevant regarding bankruptcy risk, interest rates, and firm valuation. Likewise, goodwill impairment testing information (and write-offs) might convey new information to markets in certain situations, as Sell-side Analyst 5 (Equity Analyst) explained:

“I think the share market reaction, if the markets are efficient and one understands these things, is pretty unfounded. Information has already been conveyed to the markets through quarterly and industrial sector reports. This is just a confirmation. I would say that eight out of ten investors have known it exactly in advance, but two have not, which may give some market reaction.”

Thus, even if goodwill is sunk and unliked, it has an existence that somehow and in some situations might have effects.

4.3. Goodwill information as materials for reflexive modelling

Most of the analysts we interviewed behaved like those Durocher and Georgiou (2021) interviewed. These analysts commonly emphasised that goodwill represents a sunk cost with no cash flow effect, ignoring goodwill and its use in their valuation models, thus excluding goodwill assets and expenses.

Further, Senior Analyst (Sell-side Analyst 3) continued about eliminating the effects of non-recurring items such as goodwill impairment losses in their financial analysis:

“If you think, for example, about Nokia’s result when the company publishes its report, investors will have a look at the non-IFRS figures. It is quite sure that there are so many substantial items in IFRS reporting that they unsettle the results, which are unexpected. So, investors focus on the non-IFRS world. In that world, goodwill issues are not especially central but quite the opposite: They are cleaned in the figures” Senior Analyst (Sell-side Analyst 3).

Nevertheless, some analysts paid attention to goodwill information. We identified three ways (levels of reflexivity) in which analysts try to make sense of the appropriateness of companies’ reported goodwill. For these purposes, they make their own goodwill calculations and compare the outcome reflexively against the firm’s. The following three examples (A, B, and C) illustrate these different approaches (see Appendix 4). A and B conduct separate calculations, specifically intended for goodwill impairment testing purposes. A uses a different model and B the same model for firm valuation. C does not conduct a GIT separately but uses the standard firm valuation calculation’s results to assess goodwill’s appropriateness. Hence, the enhanced understanding of goodwill in C is a by-product of a normal firm valuation.

For A, B, and C to be merely interested in analysing companies with high goodwill value is common; their motivation for goodwill evaluation is to assess the risk of impairment. However, they ultimately use the crumbs of information about cash flows obtained from GIT for their firm valuation purposes. Namely, to provide competitive advantage and high-quality analysis to their customers, analysts must find information the companies did not disclose to plug into their valuation formula. How much time and effort one wants to invest in searching for hidden information is up to the analyst. Analyst 10 describes their search for competitive advantage:

“Some analysts invest a little more time, while some put in less effort. Whoever turns more stones usually wins this game. Meeting with the management is self-evident. All analysts meet with com-

pany management. The differences come in regarding how much you get to know the competitors. You meet the management of your competitors and other people in the industry. Here are those new sources of information, and they are voluntary. For example, more than a decade ago, we compared the development of Google searches for different phone models of Nokia and Samsung, which gave a good understanding of how many Nokia phones were sold. This comparison had a good correlation and was before everyone did this [analysed Google searches]. That became self-evident, so now everyone does it. Now we build algorithms. One listed company publishes product availability information in its online store. We have built an algorithm that scrolls the inventory balance on a daily basis and can calculate how much stuff goes from there.” (Sell-side Analyst 10).

Competition in the analysts’ job market is exceptionally high. The digitalisation and internationalisation of financial markets have significantly reduced available jobs during the last decades; the financial crisis made the situation even harder. Searching for unique information and giving plausible target price estimates is essential for an analyst’s career to continue.

Practice variation in reflexive modelling: Case A, Case B, and Case C

Case A: Separate GIT recalculation practice (with a different DCF model than for firm valuation)

Analysts can recalculate impairment testing with a different model than they normally use for DCF-valuation, as the Head of Equity Research (Analyst 12) describes:

“We recalculate goodwill with a separate model [not the ordinary DCF as is used for company valuation]. It is an ad hoc exercise in which an analyst thinks about how the calculation [goodwill impairment test] can be done and what are all the aspects that have to be considered. Then the analyst makes some specific assumptions about the calculation. It includes calculation work and reasoning work and maybe a few more ‘what if’ considerations. What if this or that happens – would it still be reasonable? We do not include these ad hoc calculations in our reports [to our clients] because these calculations are very open to interpretations. Rather, we use these ad hoc calculations in addition to our regular analytical work. We are aware of goodwill impairment testing issues and conscious to react fast if something happens in the company. We also meet companies and talk to shareholders [about our own calculations] if they are interested – and usually, they are” (Head of Equity Research, Analyst 12).

He only focuses on companies with a large amount of goodwill and risk of impairment. Sensitivity analysis with the cash flows and discount rate plays a major role in his analysis. He also explains that his analyst team communicates their findings with the companies and sometimes with the shareholders, adding about the technicalities related to recalculating goodwill:

“So, to start, you have the material the company discloses when closing their account regarding the goodwill impairment testing, typically in the notes, including the assumptions used. Then you start to calculate with your own estimates about the cash flows. If you see, for example, that during the coming ten years, your value of the goodwill is only 30%, you start to ponder how much better the company should do to avoid the impairment. I also simulate with other discount rates.”

He further describes his reflexive analysis work vis-à-vis the data the companies provide:

“The easiest case is when you analyse a company that has acquired a loss-making business. The rationale for the management has been that they can make a turnaround. If you, as an analyst, think there is no way to make the business profitable, then you have a very dissenting opinion. Or sometimes you do not necessarily have a view for that particular goodwill, but you adopt a bigger picture: that there will be radical changes in profitability within this industry, affecting the valuation.”

He typically conducts the recalculations at the group level because data is not necessarily available for more detailed analysis:

“Typically, we calculate goodwill impairment tests at the group level, but sometimes companies show, for example, margins and depreciation per segment, so then we can extend our calculations to this level. We may also try to test cash-generating units if we are talking about a major acquisition. In these cases, I need to match my cash flows with the correct unit.”

The main reason for recalculating is to understand the appropriateness of the goodwill values in the books, i.e., whether a risk exists for write-downs:

“You cannot figure out the absolute truth with your own goodwill impairment calculations, but you get supporting material for your analysing work. Then, when you have pondered these issues, you are in a much better position to discuss them with the company and ask, ‘Hey, what if this and that happens?’ They are interesting calculations and ponderings. So, these calculations related to goodwill are something all analysts should work with.”

Head of Equity Research (Analyst 12) described their private meetings with management where they could pose questions about the company’s goodwill and its other financial aspects:

“We meet company management on a regular basis. The meetings cover exactly the same issues as the company publicly reports. The primary data source for us is what the companies report: out of ten meetings, five times IR director, three times CFO, and two times CEO. Typically, the IR director and CFO are there together. It is good to have the CFO there because we often talk about figures [including goodwill] at a detailed level.”

Case B: Separate GIT recalculation (with the same DCF model as for firm valuation)

Analyst B (Sell-side Analyst 10) also conducts a GIT on purpose. Unlike case A, he uses the same DCF model for this GIT recalculation as he does for a firm valuation, estimating values for all cash-generating units and combining them. He states, “It is a calculation made in a similar way to ordinary DCF but using a different mindset.” Now, the focus is not on company value but on checking, per CGU, whether he can feel comfortable with their goodwill values.

He describes the differences between ordinary company valuation and his goodwill impairment recalculation:

“We do our company valuation at the group level by summing up the segments, whereas in a [goodwill] recalculation, we focus on assessing the appropriateness of goodwill values for segments [CGUs]. In this recalculation, I compare the company’s goodwill value to my outcome. So, the approach is a bit different, but the model is the same.”

He further motivates his recalculation with the riskiness of goodwill values:

“The revaluation of the goodwill impairment test is a ‘must do’ thing in companies whose balance sheet is goodwill-dominated. ... You have to do these calculations because you can always trust balance sheet values less. Intangible assets play along a more significant role in the balance sheet of companies on a global level... We recalculate [impairment testing calculation] because a company can have such awful leeway in the calculations that it can do whatever it wants” (Sell-side Analyst 10).

In his analysis work, he emphasises the opportunity to build a competitive edge as an analyst:

“Our job is to be right. It’s very simple. In this field, you have no conditions to exist if you are not right. You need to be right in your analyses and generate added value for investors. This is a brutal industry because more than 60% of workers are useless here as they cannot generate abnormal returns. You have to belong to that 40%. ... To belong to this 40%, you have to turn all the stones, you have to be right, and you have to do more work than the others. This goodwill testing is one of those things.”

Hence, he wants to make better analyses and more accurate target price estimations than his competitors:

“If the goodwill is small or the goodwill is solid, then we should not take the time to retest the goodwill because there is little risk involved. But if there is a lot of goodwill, or it is not solid, then we will retest for the sake of information. If there is a risk that that goodwill will come down, it [retesting] has enough motivation. Impairment destroys the equity and profits of that year. I rarely remember from my stock market history when the market did not react negatively.”

He adds about the goodwill recalculation:

“Recalculation gives confidence in that analysis. You know those companies thoroughly. I have some companies I have been following for over a decade. I know every person from there – I know all their products. Of course, it gives me a home-field advantage. ... This is actually a pretty tough area mentally because it is everyday competition, and you must always be right. Those recalculations will help you to be right and increase your self-confidence. Then it is not so mentally heavy to bear that burden.”

Recalculating goodwill values became a resource for other, more fundamental insights. It is not only that “goodwill is substantially more subjective in valuation than tangible assets, such as factories. Goodwill is a part of analysing balance sheet risk and influences a company’s risk profile above all” (Sell-side Analyst 10).

“First, you have a look at the notes in the closing – the sensitivity analysis there. If you see they use, for example, 12% WACC, and they say there is 5% headroom there, profitability estimates sensible, and growth zero, then you can think this is a solid company. But then you have a company like NN firm. If they show that WACC is 6% then there is 6% growth in Russia. Once you realise the company has fucked with its calculation, you start to take it [the calculation] down and compare each parameter to your evaluation. Roughly, you can evaluate how much room for impairment there is and would still be acceptable with your parameters, which will give you approximate figures” (Sell-side Analyst 10).

Also, regarding calculating cash flows for goodwill impairment testing, he describes a difference between his analyst firm’s and the company’s approach:

“Companies can manipulate their terminal growth as they wish. They often use, in their calculations, only three years of cash flows and then a terminal value. We use ten years in our modelling and then the terminal value to get the weight of terminal value smaller and a better understanding of it.”

Analyst B also emphasises the role of close relations with management to gather and gradually accumulate relevant information in meetings with management – information not readily available in public sources – during which an analyst’s reflexive modelling can be mobilised.

“It is self-evident that we must meet the management. Our information is public, but it [usefulness of the meetings] depends on the skills of an analyst and how smartly (s)he can pose questions and interpret management. The better you know them, the better you can read them and interpret their tones. If you have followed the firms for years and met the management tens of times, you have seen them on various occasions in different moods. Then you can see when it is not going right, for example. Sometimes, the management may let something slip – a nugget of information. You gradually accumulate these nuggets.

Case C: Firm valuation DCF also used for GIT

It commonly appears that a firm valuation and GIT are thoroughly intertwined in the analyses of analysts. The exact modelling is used for both purposes; GIT is not a primary purpose of the analysis but a by-product. The results can be compared with the firm market price, while an idea can be obtained whether the goodwill is correct enough.

Analyst 8 describes this process as follows:

“In fact, we do not do goodwill impairment testing as such; we do DCF analysis, which is the same as impairment testing but much more comprehensive. Hence, even though these investors have told you they do not do impairment testing, they evaluate the real value of a company, based on future returns, which is the same as discounted cash flow” (Managing Director, Buy-side Analyst 8).

The recalculation is possible because companies present some information (in fragments) about the goodwill calculation’s parameters, which become a small seed for further inquiries:

“When we do a company valuation ... we reconstruct their goodwill impairment test. We briefly have a look at the material they give about the tests but then conduct the tests ourselves. The process is almost as important as the outcome [recoverable amount]” (Managing Director, Buy-side Analyst 8).

Goodwill would engage inquiry, and analysts and investors would mobilise their own discounted cash flow model – a device for reflexive experimentation and learning. Goodwill impairment value (analogous to the company’s share value) would be an object in that it enabled analysts to move forward and backward in their inquiries:

“Our motive for comprehensive discounted cash flow analysis is ... not only the final net present value but the process. When we punch the figures into the model, we ask ourselves, ‘Hey, what is this? Why would this be 50 after three years?’” (Buy-side Analyst 8).

The discounted cash flow calculation is a simulation where assumptions were tried, tested, and evaluated. The DCF model is built from several continuously changing components. Thus, analysts must constantly stay prepared to rebuild the DCF to update their views on the share value. This model could help reveal what companies have done regarding possible cash flow projections and possible interest rates. In this sense, the DCF is a reflexive tool (Beunza & Stark, 2012) for considering and comparing all the unknowns – those items not disclosed that would have been too sensitive for publication. The DCF can be a tool in helping one become surprised so that *“when we punch in the figures to the model, we ask ourselves, ‘Hey, what is this? Why would this be 50 after three years?’” (Buy-side Analyst 8).*

Analysts let their cash flow models organise their search for more information. Their cash flow models were calculative devices seeking relevant input – unfindable in financial accounting. However, by raising their heads a bit, analysts found other materials in the interim reports via various news channels about not only the firm in question but often about the economy:

“Then, when one or two years have passed, you visit the company, going to analyst meetings. You construct a sort of shelving unit [DCF model], continuously adding crumbs [of information] so that it gets more complete all the time. I think this is a nice stage when you know the firm better than the other analysts. You keep on updating it, completing it according to the signals you receive. If I have, for example, a certain amount in my accounts receivables for the firm or estimated a certain asset item like this, and then I hear that one of their biggest customers went bankrupt, I know there will be bad debt and consider how much goodwill would I write-off” (Buy-side Analyst 8).

In the spirit of reflexive modelling, the analysts might even interrogate company management and auditors with their own cash flow productions:

“A good starting point is a situation where we show the calculation to the management and say that the business might develop like this. You can immediately see how they react. You can at least see the worst signs – such as if they cannot grasp the idea. We keep it [calculation] very simple, but if they can’t interpret it, it is very concerning to us if the business manager cannot get the idea and big picture” (Buy-side Analyst 8).

In exceptional cases, investors appeared to have contacted the companies' auditors and pressured them to require the companies to lower their cash flow forecasts as one managing director of a private equity firm (Buy-side Analyst 8) explained:

"None of us is an industry expert, but now I talk about situations where the auditor has not reacted for four years. The company's cash flow can be 10 million, and its value is one billion. In such a case, there is no doubt the auditor should have industry experience. Fairly speaking, the auditor is terrified. I have really talked to them [auditors] against all hierarchies and said, 'Oh, come to your senses.' I know because we have one company of this sort [in our portfolio]."

Further, as Buy-side Analyst 8 suggested, investors could also rely on other forecasting institutions:

"In addition to the public information, we get many forecasts from [external] analysts. Professional industry analysts in Europe follow our domestic companies. You can get such high-quality information from there that it is even better than the information the companies provide because the world-beater analysts also analyse and meet all competitors. As the big owner, we'll get all these analyses."

In summary, as is commonly understood, analysts seem to typically ignore goodwill information in their firm valuation work (Durocher & Georgiou, 2021) but not always. As demonstrated, analysts' usage of goodwill information can be much more nuanced. We have shown that Analysts A and B conduct recalculations of GIT on purpose for the companies with considerable goodwill and risk of impairment. A uses a different model, while B uses the same model as for an ordinary firm valuation. Also, C (and some other analysts we interviewed) does not conduct a GIT separately but uses the results of the standard firm valuation calculation for assessing goodwill's appropriateness. A, B, and C first make a reflexive comparison of their calculations with the data a company discloses. The primary source of data for this comparison is the financial statement's notes. Sensitivity analyses with cash flows and discount rates play a major role at this stage. Then, analysts continue their reflexive modelling by socially interacting with the firm's management about the outcome of their recalculations but do not report their outcome to the management (nor to their clients).

5. Concluding discussion

Our study investigates financial analysts' use of goodwill information, specifically information related to goodwill impairment testing via a field study method. Hence, the study responds to Amel-Zahed et al.'s (2021) call to use non-archival data to enhance our understanding of how accounting information users process goodwill data. By drawing on the ideas of reflexive modelling (Beunza & Stark, 2012), we address this phenomenon by answering our research question: 'How do financial analysts use goodwill information in a firm valuation?'

We contribute to prior literature in three main ways. Firstly, we add nuance to Durocher and Georgiou's (2021) study by illustrating that goodwill accounting numbers do not necessarily lack economic significance for analysts and are not always ignored in their valuation work. As prior literature suggests (Durocher & Georgiou, 2021), analysts commonly ignore goodwill information in their firm valuation. Nevertheless, this is not the whole truth. Namely,

some analysts appear to use goodwill (GW) and GIT information, although this information initially disappoints them because it does not seem to fit their valuation purposes. Information's comprehensiveness depends on the time analysts have to handle incompleteness and the calculative resources mobilised to engage in reflexive modelling. Use of goodwill information is differentiated against the concern related to GW and GIT: risk testing of established assets at risk or testing the firm's future and the assumptions concerning it, which may reveal the firm's foundational cash flows, not just the principles of GW and GIT. 'Turning every stone' seems to be a strategy requiring calculative capabilities; the difference in calculative capabilities signifies different ambitions of turning stones and in investing in calculative apparatuses. Analysts are lured into using their DCF models as a reflexive tool that helps them assess what might have been information undisclosed in the financial reports. We found three practices analysts use with GW and GIT information, two of which conduct recalculations of GIT on purpose. One uses a different model, while another uses the same model as that used for a firm valuation. The third analyst uses the standard firm valuation calculation results to assess goodwill's appropriateness.

Secondly, we contribute to the financial accounting literature by bringing the concept of reflexive modelling to it and demonstrating how analysts reflexively use their DCF model to create the target share price. Analysts initially use reflexive modelling with their calculations vis-à-vis the information the firms provide and then communicate with the management about the outcome of their 'recalculations'. Using reflexive modelling, analysts compare their estimates about the model's outcome against the firm's (Beunza & Stark, 2012) and seek to solve the dissonance between theirs and the firms' seemingly irreconcilable numbers. Their analysis considers available public information and that gained in private dialogues with the firm's managers. A dissonance in estimates prompts doubt, stimulating an additional search to evaluate the assumptions and figures. For financial analysts, connecting social cues to traditional financial information seems demanding and challenging. However, in the end, reflexive modelling helps analysts build a competitive edge because of unique target price estimates and the added value provided to their final customers.

We extend the literature about calculating with something, i.e., we show how people use calculative tools in their work. Specifically, we add to Kalthoff (2005), who has shown that users take accounting more at face value, whereas we illustrate a situation where accounting is reconstructed. In Kalthoff's case, the financial data are transferred more straightforwardly to the bank's templates and formats; the financial information is discussed but unchanged. In turn, we show that analysts apply reflexive ways to analyse a specific accounting number: goodwill. Analysts reflect, compare, and benchmark the goodwill information the company disclosed to their own recalculations. In our case, analysts do not take goodwill information at face value but search for new sources of information beyond the officially disclosed company reports. Analysts question the information and search for more unique information sources to reconstruct, build, and test it; the outcome can differ somewhat from the original financial information the company disclosed. The analysts must incorporate more future-oriented information with high uncertainty to reconstruct and test GIT, making the value especially difficult to estimate but providing the potential for competitive advantage in their firm valuation.

Thirdly, we contribute to financial reporting literature by shedding light on the users' information needs. This user is often analysed as an institutional category to justify standard-setting practices (e.g., Durocher et al., 2007; Young 2006, Durocher & Gendron, 2011), or as one whose wants are identified via questionnaires (Gassen & Schwedler, 2010; Cascino et al., 2014),

experiments (Anderson et al., 2015), content analysis (Demirakos et al., 2004), and interviews (Imam, Barker, & Clubb, 2008). Like Durocher and Georgiou (2021), our study follows the ambition to analyse users' wants from financial accounting, but we apply a more process-oriented approach and ask not what users want but focus on how users engage with financial accounting. This ambition starts from the observation that in extant literature, users' involvement in formulating what they want tends to be at a distance and reveals preferences for information. We focus on users' actual and complex strategies to handle financial accounting information and make it more valuable.

We also add nuance to Barker et al. (2012), who show how analysts use publicly available and private data in their analyses and argue that access to company management is essential. We show that in the case of goodwill, it is extremely important for analysts to leave their offices and find new information sources beyond traditional financial figures. When analysts care about finding a firm's value, they curiously search for pieces of information to test the value of the goodwill asset. This activity encourages them to become like detectives or spies to collect 'military intelligence' (Knorr-Cetina, 2011). This intelligence must include unique information reflecting the future and the reliability of the goodwill value, increasing the validity of analysts' estimations in an unstable analysing task. Our case shows that analysts find private management meetings and observations beneficial but officially disclosed goodwill information unhelpful. These unique pieces of information bring input to the DCF model. Because inputs must be constantly updated, the DCF model becomes a reflexive tool (Beunza & Stark, 2012). This model is also reflexive in that it can reveal new things about the economy, such as when analysts find new hidden traces that other analysts and investors cannot. These traces are oriented towards revelation and newness, producing a comparative advantage that is more than an attempt at accurately presenting the future (Knorr-Cetina, 2011).

With regard to implications for standard-setting and enforcement of goodwill reporting, it appears that the low quality of GIT disclosures does not support analysts' work in an optimal way and greatly affects the usefulness of GW information. It is understandable, as such, that companies are reluctant to disclose more information than is required about their goodwill calculations. Nevertheless, it would be worthwhile to develop and clarify the goodwill-related disclosure requirements so that companies would use fewer boilerplate phrases from the standards and provide instead more company-specific content to analysts and other users. In addition, it would be appropriate to make greater efforts to harmonise the strictness of goodwill standard enforcement globally.

This study is not without limitations. Nevertheless, simultaneously these limitations open new avenues for interesting further research. We have used only Finnish data for our study. It would be worthwhile to investigate how analysts in other countries use goodwill information and potentially do reflexive modelling in their valuation work. Our data gathering was primarily based on interviews with many analysts (1–3 interviews per analyst). Hence, we have obtained a big picture, but we do not necessarily know in detail how analysts do their valuations and use goodwill information in them. We suggest that in future studies researchers could identify one or a few analysts who pay a lot of attention to goodwill information and do reflexive modelling in their valuations. Researchers could use these analysts as cases and follow their work intensively by participant observation or multiple interviews, for example. Furthermore, out of many users, we have investigated only financial analysts. It would be fruitful to study how creditors use goodwill information in their lending activities.

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Appendix 1. The goodwill asset

IFRS intends to promote more useful information to investors by producing (more) future-oriented values. These values would directly relate to decision-making. Goodwill is a particular asset in the balance sheet because it is not separate but a leftover from the allocation of a purchase price of other assets. Goodwill emerges in business combinations (e.g., mergers and acquisitions) when an acquirer pays more than the value of the acquiree's identifiable net assets. IAS 36 (52.) states that “[g]oodwill acquired in a business combination represents a payment made by the acquirer in anticipation of future economic benefits from assets that are not capable of being individually identified and separately recognized”. Accordingly, an item not meeting the definition of an intangible asset (under IAS 38) can be recognised as part of goodwill if the item is acquired in a business combination.

IAS 36 (impairment of assets) stipulates that a company must carry out a goodwill impairment test at least annually to ensure its goodwill is carried out at no more than its recoverable amount. If a goodwill's carrying value exceeds the recoverable value, the carrying value is reduced to the recoverable value. Accordingly, an impairment loss is an amount by which the carrying value exceeds the recoverable value. The impairment loss is an expense in the income statement. Consequently, this loss decreases a company's operating profits and equity. Reversing prior years of impairment for goodwill losses is prohibited. The recoverable value is tested separately in a company's cash-generating units (CGU). A CGU's recoverable amount is higher than its “value in use” and “fair value less costs to sell”. In the fair value less costs to sell method, the amount obtainable from selling an asset in an arm's length transaction between knowledgeable and willing parties is calculated. Consequently, the goodwill impairment loss will be recognised if both values are lower than the carrying value.

Typically, firms in the empirical sample to be discussed used the value in use method – the present value of the future cash flows expected to be derived from a CGU using a pre-tax discount rate. Consequently, the value in use method closely relates to the net present value (NPV) method in finance/capital budgeting literature. NPV is commonly advocated as the theoretically recommended approach to maximise shareholders' wealth. The calculation requires an estimation of future cash flows and a discount rate. The estimation of future cash flows can be further divided into two categories: a basic evaluation period representing the coming 3–5 years and the periods beyond. A calculation model for identifying free cash flows to be discounted can include several sub-components to be estimated: earnings before interest, taxes, depreciation, and amortisation (EBITDA); required replacement investments; and changes in networking capital requirements. Terminal value for the free cash flows beyond the basic evaluation period can be calculated for a definitive period (e.g., 15 years); cash flows can also be assumed to grow indefinitely. According to IAS 36.55, a company should use a pre-tax discount rate reflecting current market assessments of the time value of money and the specific risks in measuring value in use. Also, the discount rate can significantly affect the recoverable amount. IAS 36.57 further stipulates that the discount rate would be the entity's WACC, incremental, or market borrowing rate. Estimating WACC requires decisions related to (sub-components of) the cost of equity, debt, and target capital structure.

The largest CGU to which goodwill should be allocated for impairment testing is an operating segment defined by IFRS 8. More specifically, IAS36 stipulates that the impairment testing of goodwill must be conducted within the entity at the level at which the goodwill is monitored for internal management purposes and to which the goodwill relates, meaning testing is

undertaken for the smallest identifiable group of assets generating independent cash inflows. A company may not have to book an impairment loss of a subunit of the CGU if other subunits compensate for its negative recoverable amount.

Appendix 2. Interviews

ACTORS	FIRST ROUND DURATION IN MINUTES	SECOND ROUND DURATION IN MINUTES
Financial analysts:		
1. Senior Equity Analyst, Sell-side analyst 1	57	10*
2. Head of Strategies, Sell-side analyst 2	52	13*
3. Portfolio Manager, Buy-side analyst 1	114	11*
4. Portfolio Manager, Equities, Buy-side analyst 2	40	10*
5. Managing Director, Buy-side analyst 3	34	
6. Senior Analyst, Sell-side analyst 3	61	16*
7. Head of Equities, Direct Equities, Buy-side analyst 4	52	11*
8. Chief Executive Officer, Buy-side analyst 5	35	
9. Deputy Chief Investment Officer, Buy-side analyst 6	44	10*
10. Analyst (Equity Research), Sell-side analyst 4	69	12*
11. Equity Analyst, Sell-side analyst 5	37	
12. Analyst, Sell-side analyst 6	68	
13. Managing Director, Buy-side analyst 7	34	
14. Analyst, Sell-side analyst 7	47	
15. Head of Trading and Capital Markets, Sell-side analyst 8	34	
16. Equity Analyst, Sell-side analyst 9	63	
17. Head of Analysts, Sell-side analyst 10	77	19* + 33*
18. Equity Research Analyst, Sell-side analyst 11	60	
19. Managing Director, Buy-side analyst 8	50	13*
20. Head of Equity Research, Sell-side analyst 12	60	
Companies:		
1. Senior Vice President, Finance, Firm 1	65	14*
2. Executive Vice President, CFO, Firm 2	46	

The interview data consists of 34 interviews (total 24 hours): 22 semi-structured (21 hours) and 12 follow-up (telephone) interviews (3 hours, marked by asterisks).

Appendix 3. Interview questions

Valuation process

- How do you make your valuation (in detail)?
- Description of the process
- How does the calculation look like?
 - o Can you show/give us a template?
- How is valuation done under high uncertainty?
- Does your organization have a common procedure for valuation?
- Do you make your sell/buy/hold recommendations independently by yourself or do you need to confirm them with your colleagues or organization first before publishing them out?
- How/where do you get support for your valuation?
- How/when do you update your valuation?

Information for valuation

- What kind of information you need?
- Where/How do you get it?
- How do you meet and talk to managers?
 - o E.g., the role of investors' meetings and webinars
- Do you use proxies in valuation? How and why?

Financial accounting (financial statements) information in valuation

- What is the role of this FA information for your valuation?
- What kind of (additional) FA information you would like to get?
- How FA information is uncertain or inadequate?
- What do you do to “mend” it?
- How does FA information create questions?
 - o What kinds of questions

Goodwill in valuation

- How do you integrate Goodwill (and its depreciation) in your valuation calculation? Why?
- How do you take goodwill into account otherwise in your analysis/recommendations (sell/buy/hold)? Why?

Goodwill impairment testing

- How do you see the potential role of GIT as a vehicle for company valuation? (sum of the parts (i.e., Cash generating units) corresponds the enterprise value)?
- How do you utilize GIT information?
 - o Do you trust in GIT information provided by the company?
 - o What would you like to know more?
- How do you see the information value of an announcement of goodwill impairment?
- Do you reconstruct somehow firm's goodwill impairment test by using your own inputs? Why, how?

Appendix 4. Three cases of reflexive modelling with GIT recalculation

	A. SEPARATE GIT RECALCULATION PRACTICE (WITH A DIFFERENT DCF MODEL THAN FOR FIRM VALUATION)	B. SEPARATE GIT RECALCULATION (WITH THE SAME DCF MODEL THAN FOR FIRM VALUATION)	C. FIRM VALUATION DCF USED ALSO FOR GIT
GIT recalculation conducted on purpose	YES	YES	NO Firm valuation is simultaneously also a GIT re-calculation
The same model used as for the firm valuation	NO	YES	YES
Disclose the outcome of recalculation (in writing) to investors or companies	NO	NO	NO
Sensitivity analysing with CF and discount rate plays a major role	YES	YES	YES
Reflexive comparison of recalculation with a data disclosed by company	YES	YES	YES
Reflexive communication with firm managers about the outcome of recalculation	YES	YES	YES
Focus specifically on analysing companies with large GW and risk of impairment	YES	YES	YES (however, standard valuation conducted for all the companies)
Primary source of GW info is notes	YES	YES	YES
Level of GW recalculation	Group (seldom CGU)	CGU	CGU
Main purposes of GIT recalculation	1. reassurance of firm GW riskiness; 2. info for firm valuation through CF analysis	1. reassurance of firm GW riskiness; 2. info for firm valuation through CF analysis	1. info for firm valuation through CF analysis; 2. reassurance of firm GW riskiness
How GW/GIT info become useful 1.	GIT Recalculation enables them to be alert and react fast if something happens related to risks and future cash flows of a firm	Enhancing analyst's competitive edge vis-a-vis competitor analysts by turning every stone. GIT recalculation is one thing to obtain as thorough understanding of the firm as possible	Crumbs of information to be placed in the DCF model that is considered a sort of shelving unit (GW/GIT info one crumb in the package)
How GW/GIT info become useful 2.	Sensitivity analysis of CFs and WACC for firm valuation	Sensitivity analysis of CFs and WACC for firm valuation. A thorough analysis of terminal value	Sensitivity analysis of CFs and WACC for firm valuation
Others		-Emphasises that GIT recalculation is very similar to firm valuation but done with a different mindset	



Lahjoittaminen on tulevaisuuteen sijoittamista – Liikesivistysrahasto tukee apurahoin liikkeenjohtoa palvelevaa tutkimusta, koulutusta ja julkaisutoimintaa.

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The Nordic Journal of Business is a scholarly journal that publishes original scientific research in all fields of business studies. Different aspects of business theory and practice related, among others, to accounting, corporate governance, entrepreneurship, finance, information systems, international business, management, and marketing are within the scope of the Journal.

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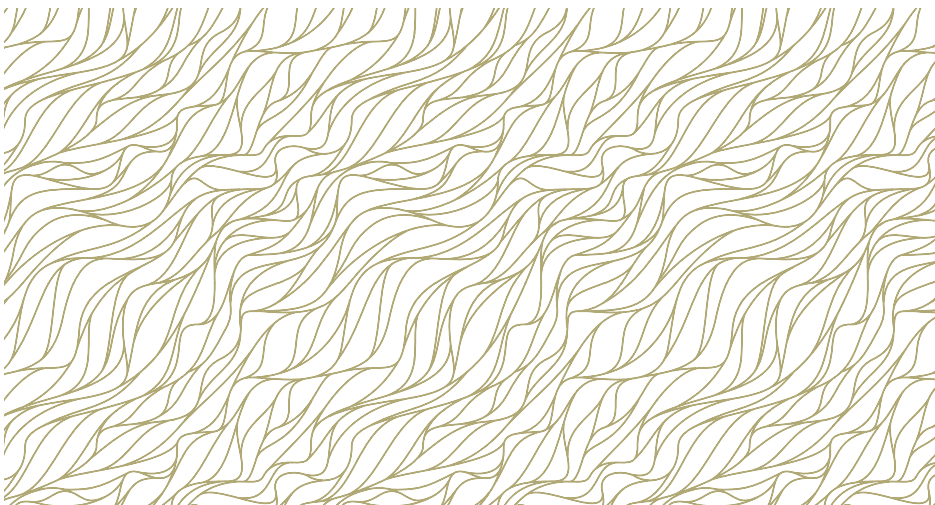
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