

## Digital Transformation in Insurance Sales: An Empirical Analysis of the Effects of COVID-19

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### Abstract

In this paper, we investigate the effects of COVID-19 on the digital transformation of insurance sales. We explicitly focus on the traditional ways of selling insurance products and aim to analyze whether COVID-19 has changed the use of digital technologies in this regard and the values of these digital technologies perceived by insurance intermediaries. For this purpose, we conducted a survey in July 2022, in which 530 exclusive agents from various insurance companies, independent agents and independent brokers from Germany participated. We compare the results of the current survey with a similar survey that we conducted in July 2020, i.e., at the beginning of the COVID-19 pandemic. Our results show that video chats with extended functions are now more widespread and valued more highly. Differences relating to the usage and perceptions of digital applications between various distribution channels still exist, however, the differences between generations are becoming less apparent.

### Zusammenfassung

In diesem Beitrag untersuchen wir die Auswirkungen von COVID-19 auf die digitale Transformation des Versicherungsvertriebs. Wir fokussieren uns explizit auf die traditionellen Wege des Verkaufs von Versicherungsprodukten und analysieren, ob COVID-19 dort die Nutzung digitaler Technologien und deren Stellenwert aus Sicht der Versicherungsvermittler verändert hat. Zu diesem Zweck haben wir im Juli 2022 eine Umfrage

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durchgeführt, an der 530 gebundene Versicherungsvertreter verschiedener Versicherungsunternehmen, Mehrfachvertreter und Versicherungsmakler aus Deutschland teilgenommen haben. Wir vergleichen die Ergebnisse dieser Umfrage mit einer ähnlichen Umfrage, die wir im Juli 2020, das heißt zu Beginn der COVID-19-Pandemie, durchgeführt haben. Unsere Resultate zeigen unter anderem, dass Videochats mit erweiterten Funktionen inzwischen häufiger eingesetzt werden und deren Nutzen höher bewertet wird. Unterschiede in der Nutzung und Wahrnehmung digitaler Anwendungen zwischen den verschiedenen Vertriebskanälen bestehen weiterhin, die Unterschiede zwischen den Generationen wurden jedoch geringer.

*Keywords:* COVID-19; Digital transformation; Empirical study; German insurance industry; Insurance sales; Survey

## 1. Introduction

As in most other industries, digital technologies offer the insurance industry opportunities to increase customer satisfaction across the entire value chain (see Eling and Lehmann, 2018; Eckert and Osterrieder, 2020; Eckert et al., 2022). Digital technologies allow to increase efficiency, e.g., due to process automation and an improvement in the interaction with customers, as a result of customer targeting and new sales channels (see Eckert et al., 2022). Besides new sales channels (e-commerce), digital technologies also allow to improve traditional sales channels, e.g., on account of video chats for customer interaction (see Eckert et al., 2021). Since many insurance products are very complex and are low interest products (see Lechner and Zitzmann, 2022), selling insurance products with the help of insurance intermediaries is still relevant and is, therefore, the focus of our paper.

To analyze the status quo of digital transformation in traditional insurance sales, Eckert et al. (2020) conducted a survey in July 2020. Based on 671 participants from Germany (exclusive agents from various insurance companies, independent agents and independent brokers) they found that the digital transformation was not very advanced and that many insurance intermediaries did not regard digital technologies as important. For instance, around half of the participants did not use video chats and did not see the benefit of this process. July 2020 was the start of the COVID-19 pandemic and time has elapsed since then. The COVID-19 pandemic fostered the digital transformation in many industries and emphasized the benefits of digital technologies in many cases (see, e.g., António and Rita, 2021; Barrutia and Echebarria, 2021; Li, 2021). Hence, the goal of this paper is to investigate the effects of the COVID-19 pandemic on traditional insurance sales. We aim to address the following questions: is the status quo of the digital transformation now more advanced and are insurance intermediaries now more convinced of the benefits of digital technologies?

For this purpose, we carried out another survey in July 2022. To allow for the best possible comparability, we considered a comparable population, used the same online survey tool, asked the same questions and gave the participants the same amount of time as in the study by Eckert et al. (2020). This led us to 530 participants, all of whom sell insurance products. Nevertheless, there are certain limitations for comparability. The sample size in 2020 was slightly larger (671 participants) and the sample in 2020 contained slightly more sales units with an average age exceeding 50 years (47.3 %) than in 2022 (44.3 %). However, approximately, the characteristics of the two samples are comparable. Another limitation regarding the interpretation of our results in light of COVID-19 pandemic is that COVID-19 pandemic certainly played a very relevant role within this time-frame, but we do not eliminate other effects (such as technological progress).

Our results show that there has been some progress in relation to the usage of digital applications and the perceived value of these. Compared with the study in 2020, our 2022 results show, for instance, that more insurance intermediaries send business transactions digitally to the insurance company. Moreover, video chats, in general, but especially extended video chats including screen/white-board sharing have become more important. However, there is still a share of insurance intermediaries that do not send any business transactions to the insurance company digitally and do not use any of the digital applications we asked about in our survey. Further analysis shows that in 2022, exclusive agents are still ahead in terms of the digital transformation compared with independent agents and independent brokers, which is in line with the results from 2020 in Eckert et al. (2021). However, differences between generations that were apparent in 2020 (see Eckert et al., 2021) are vanishing and sales units with an average age exceeding 50 years have caught up.

Hence, insurance companies have to deal with the fact that there is still a certain proportion of insurance intermediaries that do not use digital applications and do not wish to use them, because they do not see the benefit of doing so. In this case, insurers must also highlight and clarify the advantages for intermediaries and customers. However, certain insurance intermediaries, who are currently not using digital applications, are aware of the benefits of applying these applications. In this regard, insurance companies could support and enable the insurance intermediaries to facilitate the digital transformation.

The remainder of this paper is structured as follows. In Section 2, we explain our research methodology. Section 3 presents the results of our survey in 2022 and compares these with the results of the survey in 2020. Based on this, Section 4 provides a discussion of the results. Finally, Section 5 contains the conclusion.

## 2. Research Methodology

According to Eckert et al. (2021) we conducted a computer-based web survey with single-choice questions in July 2022. Once again we had the support of bbg Betriebsberatungs GmbH (known for AssCompact) and the Bundesverband Deutscher Versicherungskaufleute (BVK; the Federal Association of German Insurance Merchants). We used the same questionnaire as in Eckert et al. (2021) and the pretests were conducted with bbg Betriebsberatungs GmbH and with insurance sales representatives. This resulted in a total of 530 exclusive participating agents from various insurance companies, independent agents and independent brokers from Germany.

The first part of the questionnaire contains questions relating to the sales unit of the participant, e. g., age structure, business type and the position of the participant. Subsequently, the main part of the questionnaire focuses on specific digital applications, such as messenger services or video chats. For each application we asked whether the respective sales unit uses this application or at least plans to do so in the future ('Yes', 'No, however, I plan to do so', 'No, and do not currently plan to do so', 'Unknown'). In the case of business transactions being sent digitally, we asked for percentage values (interval-scaled, 0–100 %). Moreover, to be able to investigate the mindset of the insurance intermediaries, we asked the participants about their perception of the value added by the respective digital applications (measured on a seven-point Likert scale from 1 = 'very low' to 7 = 'very high').

Since we use a web survey design, a limitation of our research methodology might be selection bias. Less digitally savvy participants might be under-represented, because they might be less likely to participate (Bethlehem, 2010). Moreover, by comparing the status quo in 2020 with the status quo in 2022, we can actually see the holistic development over these two years. Within this time-frame, the COVID-19 pandemic has surely played a very significant role, however, we do not isolate the effects of the COVID-19 pandemic from other factors (such as technological development) which also influence our results.

## 3. Results

In what follows, we present the results of our survey in July 2022 and directly compare these with the results of the survey from July 2020 (see Eckert et al., 2021).

General Results

Table 1 presents the characteristics of the participants in the surveys from July 2020 and July 2022. In 2022, we had a total of 530 participants compared with 671 participants in 2020 and had a sufficiently large sample in each subsample (type of company and average age of the sales force). The composition with respect to “type of the company” was very similar between the two studies. In 2022, slightly more participants belonged to the group with an “average age of the sales force” of younger than 40 years, however, overall, the age structure was similar, and nearly half of the participants were still older than 50 years. This also reflects the challenge of recruiting young people into insurance sales.

Table 1  
Descriptive statistics regarding the sales units in 2020 and 2022

Variable	Value	Absolute frequency		Relative frequency in %	
		2020	2022	2020	2022
Type of company	Exclusive agency	348	258	51.9	48.7
	Independent agency and broker	312	253	46.5	47.7
	Other	11	19	1.6	3.6
Average age of the sales force	Younger than 40 years	127	120	19.6	23.2
	Between 40 and 50 years	193	145	29.7	28.0
	Older than 50 years	307	229	47.3	44.3
	Unknown	22	23	3.4	4.4

In both studies we asked the participants about the various digital applications (e.g., CRM system, video chat) and whether they use the digital application or plan to do so. Table 2 provides the respective results. For instance, 73.8 % of the participants in 2020 used CRM systems and 5.7 % planned to do so, while in 2022, 83.4 % used CRM systems and a further 3.9 % would like to use them in the future. Hence, with respect to CRM systems we see clear progress in the spread of this digital application.

However, certain CRM systems are basic and others are, e.g., capable of working with unstructured data or are able to generate automated recommendations based on portfolio analysis. Due to that, we asked the participants who are al-

Table 2

**Descriptive statistics regarding the use of digital applications by sales units  
(absolute frequency and relative frequency in % in brackets) in 2020 and 2022**

Digital application	Study	Do you use this digital application?			
		Yes	No, however, I plan to do so	No, and do not currently plan to do so	Unknown
CRM system	2020	495 (73.8)	38 (5.7)	123 (18.3)	15 (2.2)
	2022	427 (83.4)	20 (3.9)	63 (12.3)	2 (0.4)
CRM system capable of working with unstructured data	2020	299 (60.5)	59 (11.9)	95 (19.2)	42 (8.5)
	2022	270 (63.2)	50 (11.7)	61 (14.3)	46 (10.8)
CRM system capable of generating automated recommendations, based on portfolio analyses	2020	316 (63.8)	75 (16.1)	80 (15.2)	24 (4.9)
	2022	232 (54.5)	72 (16.9)	89 (20.9)	33 (7.7)
Messenger services for customer interaction	2020	414 (61.7)	44 (6.6)	207 (30.8)	6 (0.9)
	2022	272 (54.0)	28 (5.6)	200 (39.7)	4 (0.8)
Video chats for customer interaction	2020	340 (50.7)	154 (23.0)	174 (25.9)	3 (0.4)
	2022	299 (56.9)	62 (12.6)	142 (30.2)	1 (0.3)
Extended video chats including screen/whiteboard sharing	2020	335 (49.9)	154 (23.0)	168 (25.0)	14 (2.1)
	2022	252 (81.2)	28 (11.6)	19 (7.2)	0 (0.0)
Risk assessment at the point of sale with a reduced number of questions	2020	279 (41.6)	110 (16.4)	243 (36.2)	39 (5.8)
	2022	214 (37.8)	95 (20.5)	186 (38.9)	10 (2.7)

ready using CRM systems two further questions regarding the functionality of their CRM system. While slightly more CRM systems are able to work with unstructured data (60.5 % in 2020 and 63.2 % in 2022), the share of CRM systems, capable of generating automated recommendations based on portfolio analyses has decreased (63.8 % in 2020 and 54.5 % in 2022). This indicates that the participants who recently started using CRM systems use simplified CRM systems without advanced artificial intelligence.

The share of participants using messenger services for customer interaction surprisingly declined from 61.7 % in 2020 to 54.0 %, however, relatively more participants use video chats for customer interaction (56.7 % in 2022 and 50.7 % in 2022). A reason might be that video chats, which are a better substitute for face-to-face meetings, are deemed to be more convenient and are replacing messenger chats. Moreover, of the participants using video chats, a considerably higher proportion now use extended video chats including screen/whiteboard sharing.

In Table 3 we present the results relating to the percentage of business transactions sent digitally to the insurance company in 2020, compared with 2022. In both studies, we differentiated between the steps “application of a contract”, “conclusion of a contract” and “claims management”. For instance, in the step “application of a contract”, on average, 77.3 % of the participant transactions were sent digitally to the insurance company in 2020. The corresponding median of 90 means that half of the participants sent at least 90 % of the business

Table 3  
Descriptive statistics regarding the percentage of business transactions in the steps “application of a contract”, “conclusion of a contract” and “claims management” being sent digitally to the insurance company in 2020 and 2022

Digital application	Study	Digitally sent business transactions to the insurance company in % in the following steps					
		N	Mean	Median	Standard deviation	Minimum	Maximum
Application of a contract	2020	671	77.3	90	27.7	0	100
	2022	530	80.1	95	28.6	0	100
Conclusion of a contract	2020	671	77.9	90	26.6	0	100
	2022	530	78.6	95	29.9	0	100
Claims management	2020	671	76.8	90	28.4	0	100
	2022	530	77.6	92	31.1	0	100

Table 4

Descriptive statistics regarding the participants' perceptions of the added value provided by the respective digital applications (a  
bsolute frequency and relative frequency in % in brackets)

Digital application	Study	How much do you rate the added value?							
		Very low (1)	Low (2)	Rather low (3)	Neutral (4)	Rather high (5)	High (6)	Very high (7)	Unknown
CRM system	2020	20 (3.0)	28 (4.2)	30 (4.5)	84 (12.5)	96 (14.3)	116 (17.3)	263 (39.2)	34 (5.1)
	2022	17 (3.3)	5 (1.0)	25 (4.9)	27 (5.3)	40 (7.8)	76 (14.8)	310 (60.4)	13 (2.5)
CRM system capable of working with unstructured data	2020	8 (1.6)	14 (2.8)	17 (3.4)	89 (18.0)	112 (22.6)	97 (19.7)	133 (26.8)	25 (5.0)
	2022	2 (0.5)	3 (0.7)	24 (5.6)	83 (19.4)	75 (17.6)	103 (24.1)	112 (26.2)	25 (5.9)
CRM system able to generate automated recommendations based on portfolio analyses	2020	6 (1.2)	17 (3.4)	26 (5.3)	90 (18.2)	107 (21.6)	123 (24.8)	112 (22.6)	14 (2.8)
	2022	3 (0.7)	4 (0.9)	30 (7.1)	71 (16.7)	133 (31.3)	105 (24.7)	74 (17.4)	5 (1.2)
Messenger services for customer interaction	2020	30 (4.5)	45 (6.7)	66 (9.8)	139 (20.7)	122 (18.2)	121 (18.0)	124 (18.5)	24 (3.6)
	2022	34 (6.7)	79 (15.6)	15 (3.0)	123 (24.4)	61 (12.1)	59 (11.7)	112 (22.2)	22 (4.4)



Video chats for customer interaction	2020	32 (4.8)	47 (7.0)	100 (14.9)	175 (26.1)	138 (20.6)	75 (11.2)	62 (9.2)	42 (6.3)
	2022	16 (3.2)	51 (10.1)	92 (18.3)	135 (26.8)	80 (15.9)	52 (10.3)	61 (12.1)	16 (3.2)
Extended video chats including screen/white-board sharing	2020	35 (5.2)	29 (4.3)	62 (9.2)	154 (23.0)	136 (20.3)	89 (13.3)	116 (17.3)	50 (7.5)
	2022	2 (0.7)	8 (2.7)	27 (9.0)	54 (18.1)	54 (18.1)	77 (25.8)	75 (25.1)	2 (0.7)
Risk assessment at the point of sale with a reduced number of questions	2020	13 (1.9)	20 (3.0)	43 (6.4)	149 (22.2)	152 (22.7)	143 (21.3)	97 (14.5)	54 (8.0)
	2022	20 (4.0)	10 (2.0)	37 (7.4)	99 (19.9)	94 (18.9)	99 (19.9)	111 (22.3)	27 (5.4)
Sent business transactions to the insurance company digitally when applying for a contract	2020	3 (0.4)	3 (0.4)	10 (1.5)	32 (4.8)	94 (14.0)	118 (17.6)	408 (60.8)	3 (0.4)
	2022	9 (1.9)	0 (0.0)	2 (0.4)	16 (3.3)	48 (9.9)	85 (17.5)	323 (66.6)	2 (0.4)
Sent business transactions to the insurance company digitally to conclude a contract	2020	3 (0.4)	5 (0.7)	6 (0.9)	42 (6.3)	106 (15.8)	126 (18.8)	377 (56.2)	6 (0.9)
	2022	10 (2.1)	1 (0.2)	2 (0.4)	23 (4.7)	30 (6.2)	84 (17.3)	333 (68.7)	2 (0.4)
Sent business transactions to the insurance company digitally during the process of claims management	2020	4 (0.6)	5 (0.7)	8 (1.2)	46 (6.9)	101 (15.1)	143 (21.3)	357 (53.3)	7 (1.0)
	2022	11 (2.2)	1 (0.2)	4 (0.8)	27 (5.5)	50 (10.1)	76 (15.4)	312 (63.3)	12 (2.4)

transactions in this step to the insurance company and the other half of the participants sent more than 90 %. The standard deviation of 27.7 indicates the scatter between the participants.

Comparing the results from 2020 and 2022, we see that on average more applications of a contract were sent digitally to the insurance company (80.1 % in 2022 compared with 77.3 % in 2020) and the median increased from 90 to 95 in 2022. That means that more than the half of the participants sent more than 95 % of their business transactions in this step to the insurance company using digital means. Since the standard deviation increased from 27.7 to 28.6, the scatter between the participants increased. The increase in business transactions being sent digitally to the insurance company in the step “application of a contract” can be associated with those participants who have already increased their share to a high level, while there are still a certain number of participants that do not send any business transactions digitally to the insurance company. The gap between the status quo and the hypothetical case that all business transactions are sent digitally to the insurance company is, therefore, due to the insurance intermediaries that do not want to or cannot use the digital process for technical reasons. The results in the following two steps, “conclusion of a contract” and “claims management” are analogical.

Tables 4 and 5 focus on the perceptions of the participants; in this regard, Table 4 presents the detailed results. For instance, in the current 2022 study, 3.3 % of the participants consider the value added by CRM systems to be “very low”, whereas 60.4 % deem the value to be “very high”, as shown in Table 4. Compared with the results from 2020, the share of participants that value CRM systems increased significantly (in 2020 only 39.2 % considered the value of these systems to be “very high”). This effect can also be seen in Table 5; in this table, we calculate the respective mean and median, both of which increased between 2020 and 2022 (the mean in 2020 was 5.5 compared to 6.1 in 2022; the median in 2020 was 6 compared to 7 in 2022). To calculate the mean values, we assign “very low” a “1” and “very high” a “7”. Hence, a mean of 6.1 means that, on average, all participants rate CRM systems slightly higher than “high” and a median of 7 means that at least half of the participants rate the value added as “very high”.

Overall, the results are rather similar across both studies. However, transferring documents to the insurance company digitally was, on average, rated slightly higher in 2022 than in 2020. While there are still a certain number of participants that do not see the benefits of digital transactions (and the share is even rising), the ‘better’ rating results from participants that increased their rating from “neutral”, “rather high” or “high” to “very high”. Combining these results with our results from Table 3, it seems to be the case that most participants regularly send business transactions digitally and value the benefit of this, while

there are still a number of participants that do not send any business transactions digitally, because these participants do not consider this method as being of benefit (rather than being unable to do so due to (individual) technical difficulties).

Table 5

**Descriptive statistics regarding the participants' perceptions of the added value provided by the respective digital applications (measures of location)**

Digital application	Study	How much do you rate the added value?		
		N	Mean	Median
CRM system	2020	637	5.5	6
	2022	513	6.1	7
CRM system capable of working with unstructured data	2020	470	5.4	5
	2022	427	5.4	6
CRM system able to generate automated recommendations based on portfolio analyses	2020	481	5.3	5
	2022	425	5.2	4
Messenger services for customer interaction	2020	647	4.8	5
	2022	505	4.5	4
Video chats for customer interaction	2020	629	4.3	4
	2022	503	4.3	4
Extended video chats including screen/whiteboard sharing	2020	621	4.7	5
	2022	299	5.3	6
Risk assessment at the point of sale, with a reduced number of questions	2020	617	5.0	5
	2022	497	5.1	5
Business transactions sent digitally to the insurance company when applying for a contract	2020	668	6.3	7
	2022	485	6.4	7
Business transactions sent digitally to the insurance company to conclude a contract	2020	665	6.2	7
	2022	485	6.4	7
Business transactions sent digitally to the insurance company during the process of claims management	2020	664	6.2	7
	2022	493	6.3	7

The results regarding messenger services are also interesting, as the mean and median decreased (4.8 and 5 in 2020 and 4.5 and 4 in 2022) as shown in Table 5. According to Table 4, in 2022, a share of 22.3 % equated to “low” or “very low” added value, compared to a share of 11.2 % in 2020. However, the share of “very high” added value increased from 18.5 % to 22.2 %. Hence, it might be the case that certain participants integrated messenger services in their workflow in a professional manner and value the benefit of this tool. However, there might also be participants that had higher expectations in terms of usability and realized that messenger services are not an alternative for, e.g., face-to-face meetings; consequently, these participants may have been disappointed.

In contrast to messenger services, the perceived value of extended video chats, including screen/whiteboard sharing has risen sharply (50.9 % rated these services as “high” or “very high” with a mean of 5.3 in 2022, versus 30.6 % and a mean of 4.7 in 2020), while for video chats in general, the perceived value improved only slightly. Hence, it seems to be the case that video chats may provide an alternative for face-to-face meetings, however, only with extended functionality.

### *Specific subsample results*

In their study in 2020, Eckert et al. (2021) found that the status quo of digital transformation differs significantly between exclusive agents on the one hand and independent agents and brokers on the other hand. The results show, for instance, that exclusive agents are significantly further ahead in terms of the use of digital technologies. Similarly, the latter had a positive attitude towards digital transformation. Based on this, we now provide specific subsample results to investigate whether the differences are still visible.

Table 6 shows specific subsample results regarding the use of digital applications, differentiating between exclusive agents on the one hand and independent agents and brokers on the other hand. For instance, while 145 exclusive agents currently use CRM systems, capable of working with unstructured data, 48 do not. Hence, the share of exclusive agents using this digital application is higher than that of independent agents and brokers, since 114 independent agents and brokers use this kind of application and 59 do not. With the exception of CRM systems, this is the same for all other digital applications. The results of Eckert et al. (2021) are essentially the same<sup>1</sup>, confirming that exclusive agents are still ahead in relation to the use of digital applications.

While the differences relating to business transactions sent digitally were not statistically significant at a level of 5 % in Eckert et al. (2021), in Table 7 there

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<sup>1</sup> Eckert et al. (2021) also find that the share of participants using the digital application is higher in the case of exclusive agents in each digital application, with the exception of CRM systems.

were minimal differences between exclusive agents and independent agents and brokers, both groups being very advanced in this regard.

*Table 6*  
**Use of digital applications among exclusive agents and among independent agents and brokers.**

Digital application	Exclusive agents		Independent agents/brokers	
	Yes	No	Yes	No
CRM system	208	34	204	33
CRM system capable of working with unstructured data	145	48	114	59
CRM system able to generate automated recommendations based on portfolio analyses	127	67	101	84
Messenger services for customer interaction	158	85	130	132
Video chats for customer interaction	156	87	126	111
Extended video chats including screen/whiteboard sharing	146	10	96	30
Risk assessment at the point of sale with a reduced number of questions	125	116	78	154

*Table 7*  
**Use of digital applications among exclusive agents and among independent agents and brokers.**

Digital application	Exclusive agents		Independent agents/brokers	
	At least 90 %	At most 10 %	At least 90 %	At most 10 %
Business transactions sent digitally to the insurance company when applying for a contract	168	18	140	8
Business transactions sent digitally to the insurance company to conclude a contract	160	19	146	10
Business transactions sent digitally to the insurance company during the process of claims management	163	27	132	15

Eckert et al. (2021) found that independent agents and brokers value specific digital applications very differently and our results are similar (see Table 8). As in Eckert et al. (2021), independent agents and brokers value CRM systems and video chats for customer interaction more highly than exclusive agents. Exclusive agents, however, usually prefer messenger services and a risk assessment at the point of sale. In particular, with respect to messenger services and a risk assessment at the point of sale, this is also consistent with the results regarding the

Table 8

**Participants' perceptions of the added value provided by the respective digital applications among exclusive agents and among independent agents and brokers.**

Digital application	Exclusive agents		Independent agents/ brokers	
	Rating at least "high"	Rating at most "low"	Rating at least "high"	Rating at most "low"
CRM system	177	11	188	3
CRM system capable of working with unstructured data	109	1	94	4
CRM system able to generate automated recommendations based on portfolio analyses	87	1	87	6
Messenger services for customer interaction	95	36	73	62
Video chats for customer interaction	44	37	65	29
Extended video chats including screen/whiteboard sharing	81	7	68	3
Risk assessment at the point of sale with a reduced number of questions	138	9	67	21
Business transactions sent digitally to the insurance company when applying for a contract	207	7	197	2
Business transactions sent digitally to the insurance company to conclude a contract	215	8	191	3
Business transactions sent digitally the insurance company during the process of claims management	199	8	178	3

use of these applications. However, although independent agents and brokers value video chats more than exclusive agents, they rarely use them. This is similar in respect of all other applications, whereby the perceptions between these two groups do not differ, however, exclusive agents are forging ahead in terms of the usage of these services.

Besides differences based on the distribution channel, Eckert et al. (2021) also identified significantly different results in sales units with an average age of less than 40 years, compared with sales units with an average age exceeding 50 years. These results show that younger sales units use digital applications more often and significantly value their benefits. In what follows, we differentiate our results among these subsamples and analyze them in more detail.

Tables 9 and 11 focus on the use of digital applications, depending on the average age of the sales unit. For instance, 91 sales units with an average age of less than 40 years use CRM systems and 18 do not. Moreover, Table 9 shows that 185 sales units with an average age exceeding 50 years use CRM systems and 32 do not. When comparing these results with the results of Eckert et al. (2021), it was identified that sales units with an average age exceeding 50 years had caught up from the perspective of digital applications. For instance, while the study by Eckert et al. (2021) highlighted that younger sales units used considerably more extended video chats and CRM systems, the percentage of usage in our 2022 study was comparable between these groups. Moreover, while Eckert et al. (2021) found that younger sales units sent significantly more business transactions to the insurance company digitally at every step, Table 10 shows that the share amongst sales units with an average age exceeding 50 years is even slightly higher. Nevertheless, there are still differences. For instance, messenger services are still more common among younger sales units. Hence, overall, it seems to be the case that there are diminishing differences between generations, which is also the case in other contexts (see Puttaiah et al., 2020). Potentially, the restrictions during the COVID-19 pandemic motivated sales units of all generations to increase their use of digital applications.

Table 9

**Use of digital applications among sales units with an average age of less than 40 years and sales units with an average age exceeding 50 years.**

Digital application	Average age < 40 years		Average age > 50 years	
	Yes	No	Yes	No
CRM system	91	18	185	32
CRM system capable of working with unstructured data	50	32	107	50
CRM system able to generate automated recommendations based on portfolio analyses	65	23	118	41
Messenger services for customer interaction	74	37	114	101
Video chats for customer interaction	85	26	80	136
Extended video chats including screen/whiteboard sharing	73	12	61	19
Risk assessment at the point of sale with a reduced number of questions	46	64	68	148

Table 10

**Use of digital applications among exclusive agents and among independent agents and brokers.**

Digital application	Average age < 40 years		Average age > 50 years	
	At least 90 %	At most 10 %	At least 90 %	At most 10 %
Business transactions sent digitally to the insurance company when applying for a contract	85	16	124	5
Business transactions sent digitally to the insurance company to conclude a contract	73	14	144	8
Business transactions sent digitally to the insurance company during the process of claims management	73	7	135	12



Table 11

**Participants' perceptions of the added value provided by the respective digital applications among exclusive agents and among independent agents and brokers.**  
**This table shows the raw frequencies for each digital application.**

Digital application	Average age < 40 years		Average age > 50 years	
	Rating at least "high"	Rating at most "low"	Rating at least "high"	Rating at most "low"
CRM system	83	8	160	3
CRM system capable of working with unstructured data	45	0	85	4
CRM system able to generate automated recommendations based on portfolio analyses	40	0	76	6
Messenger services for customer interaction	48	9	65	55
Video chats for customer interaction	20	16	31	30
Extended video chats including screen/whiteboard sharing	38	1	41	2
Risk assessment at the point of sale with a reduced number of questions	61	0	58	22
Business transactions sent digitally to the insurance company when applying for a contract	88	7	180	1
Business transactions sent digitally to the insurance company to conclude a contract	87	7	183	2
Business transactions sent digitally to the insurance company during the process of claims management	86	7	181	3

Finally, in Table 11 we investigate the perceptions of sales units with different average ages. Eckert et al. (2021) found considerable differences between younger sales units, which significantly valued more digital applications. With the exception of messenger services, the results in our 2022 study are consider-

ably different. The perceptions of sales units with an average age exceeding 50 years and sales units with an average age of less than 40 years are very similar. In some cases, slightly younger sales units value the benefits of a digital application (e.g., risk assessment at the point of sale) but there are also digital applications to which the older sales units attributed even more value (e.g., sending business transactions digitally to the insurance company). These results therefore fit very well with the results in Tables 9 and 11. Differences in usage and differences in the perceptions of digital applications seem to have diminished between generations during the COVID-19 pandemic.

#### 4. Discussion and Business Implications

According to Lechner and Zitzmann (2022), CRM systems are very important as regards driving the digital transformation in traditional insurance sales and allowing detailed portfolio and customer analysis. Consequently, our results show that in 2022, more insurance intermediaries used CRM systems than in 2020. However, our results also indicate that most of the insurance intermediaries that have recently started using CRM systems, use basic systems. One explanation might be that the COVID-19 pandemic generated the need to use digital applications, however, a certain proportion of insurance intermediaries still need to be enabled to fully exploit the potential of the digital transformation. Since the average rate of the added value of more complex CRM systems is rather high (see Table 5), it therefore might be useful for the insurer to support insurance intermediaries in their use of CRM systems with advanced artificial intelligence.

Further results show that the share of insurance intermediaries using messenger services has declined, while the use of video chats and particularly extended video chats has strongly increased. Hence, it seems to be the case that insurance intermediaries have concluded that the functionality of messenger services is not sufficient, but extended video chats may serve as an alternative to face-to-face meetings in appropriate situations. To further support the digital transformation in insurance sales, it might be useful to train insurance intermediaries to use extended video chats but also to suggest ways of integrating messenger services into a workflow, not as an alternative to face-to-face meetings but as a tool, e.g., to give brief information to the customer about the status of a request without the interruption of a phone call. An increasing number of insurance intermediaries highly value the benefits of messenger services.

After more than two years since the start of the COVID-19 pandemic, around 80% of business transactions, on average, are sent digitally to the insurance company. However, it is rather the case that 80% of the participants send almost all business transactions to the insurance company, while the remainder send

hardly any business transactions to the insurance company. Taking into account the attitude of the participants, our results indicate that the general conditions allow digital workflows, however, certain insurance intermediaries prefer an analogue method. To foster digital transformation, insurance companies should, therefore, aim to motivate and convince these insurance intermediaries to submit business transactions by digital means. Here, the insurer should emphasize more clearly the importance and benefits of digital processes. Business transactions sent digitally form the basis for the digitization of operational processes, and digital processes are faster, less error-prone and are in the long run more cost-effective, resulting in wins for intermediaries, customers and insurance companies alike.

Further results show that exclusive agents are still ahead in terms of digital transformation in traditional insurance sales, compared with independent agents and independent brokers. It seems to be the case that insurance companies are able to support their exclusive agents in the correct way. According to Lechner and Zitzmann (2022), it is important for insurance companies to support their exclusive agents in digital transformation, as this will allow them to merge their internal service with sales, and requests will be processed more quickly, thereby increasing customer satisfaction (see Eckert et al., 2022). On the other hand, this is also a great opportunity for exclusive agents to present a unique selling proposition, giving them a reason to exist in the long term: a perfectly coordinated and highly digitized interaction between insurance companies and exclusive agents (see Lechner and Zitzmann, 2022). However, independent agents and independent brokers also perceive the value of digital applications and therefore, seem to be motivated. We can also observe a trend in the market for insurance brokers to form pools or, in the case of specialist brokers, an increasing market concentration through acquisitions. The merger will provide the individual brokers with centralized access to innovative and professional technology. Hence, insurance companies should aim to cooperate, which will enable them to better use these digital applications by providing more support or training.

Finally, while our results show that the differences in the usage and perceptions of digital applications between different generations are disappearing, development over time (in 2020, younger sales units were significantly ahead) has shown that younger sales units are leading the digital transformation. Digital transformation is a process and there will be many more opportunities and a greater potential to further develop this in the future. In order to take a leading role and manage this change, it is important that insurance sales inspire young people to become insurance intermediaries. This is also emphasized by the fact that the average age of insurance intermediaries is rather high at around 51 years in Germany (see Versicherungsbote, 2021).

## 5. Summary

The aim of this paper was to study the effects of the COVID-19 pandemic on the digital transformation of insurance sales. For this purpose, we conducted a survey in July 2022 in which 530 insurance intermediaries from Germany participated. We compared the results of this study with the results of Eckert et al. (2021), who conducted the same survey two years earlier with 671 participants. While the characteristics of the samples are similar, there are also some limitations for comparability (e.g., different sample size: 671 vs. 530, slightly different share of sales units with an average age exceeding 50 years: 47.3 % vs. 44.3 %).

Our results show that in 2022, a higher proportion of insurance intermediaries were using specific digital applications, such as video chats with extended functions and value their benefits more than in 2020. Moreover, insurance intermediaries are sending more business transactions digitally to insurance companies than previously. Hence, there is evidence of some progress relating to the digital transformation in insurance sales.

Differences between exclusive agents on the one hand and independent agents and independent brokers on the other hand still exist. Exclusive agents are clearly ahead in terms of applying digital technologies, which was also the case in the 2020 study (see Eckert et al., 2021). However, the perceptions of the value of these digital applications are comparable amongst these two groups, which was not the case in the 2020 study. Hence, it may be that independent agents and independent brokers are now beginning to see the benefits. Supporting and enabling them might, therefore, be useful as a means of fostering their digital transformation.

Eckert et al. (2021) also found differences depending on the average age of the sales unit. When differentiating between sales units with an average age of less than 40 years and sales units with an average age exceeding 50 years, minimal differences were noted. Hence, it seems that the differences between generations have diminished during the COVID-19 pandemic.

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