The Synchronous Video Interviews in Personnel Selection Processes

Alicja Balcerak[1], Jacek Woźniak[2]

Abstract:

Purpose: The aim of this article is to compare the fairness perception of traditional (face-to-face) and synchronous video interviews as personnel selection tools, and an investigation of candidates' characteristics influencing their full acceptance of synchronous video interviews.
Design/Methodology/Approach: An e-questionnaire conducted on a large panel in January 2019 consisting of 448 participants with the method of logistic multivariate regression analysis has been used.
Findings: Differences in acceptance of traditional and synchronous video interviews as personnel selection tools depend on process favourability and procedural justice dimensions. They are not significant on the dimensions of 'fairness' and 'scientific evidence' and marginally signidicant on 'respect of privacy' and 'interpersonal warmth'. A logistic multivariate regression analysis showed that – of the five potential predictors studied – only individual innovativeness and previous experience with synchronous video interviews were significant. Demographic factors (gender, age) and test anxiety do not influence acceptance of the synchronous video interview as a personnel selection tool.
Practical Implications: The present results suggest that an increase in acceptance of synchronous video interviews as a personnel selection tool is to be expected, especially in the case of innovative candidates.
Originality/Value: The present study is one of the first studies in the social justice framework on the Polish population to compare differences in perception of traditional and synchronous video interviews as personnel selection tools.

Keywords: Personnel selection, synchronous video interview, organizational justice.

JEL classification: M51, J20, L20.

Paper Type: Research study.

---

[1]Wroclaw University of Science and Technology, Faculty of Computer Science and Management, Wrocław, Poland, ORCID: 0000-0002-4507-0497, alicja.balcerak@pwr.edu.pl;
[2]University of Economics and Human Sciences, Warsaw, Poland, ORCID: 0000-0003-4610-2822, j.wozniak@vizja.pl;

1. Introduction

According to Volberda *et al.* (2014) there are three degrees of newness of management innovation, type 1 new to the world, type 2 new to the organization and adapted to the setting, and type 3 new to the organization without adaptation. This paper concerns a specific innovation, most often located in type 3, namely, the use in personnel selection of synchronous video interviews (from now on referred to as SVI). Although early adaptations of this innovation began in the 1990s, its diffusion was accelerated by the COVID-19 pandemic.

The benefits for companies of using ICT-based selection tools in the selection of applicants are, first and foremost, a reduction in costs and time, and next – enlarging the pool of candidates to include people from different locations, and simplifying selection procedures (Woods *et al.,* 2020). The potential increase in candidates' satisfaction with the entire selection process (McCarthy *et al.,* 2017), which becomes faster and requires lower expenditures from candidates, is also important for companies. An additional reason has recently appeared with the arrival of the pandemic - concern for safety. It is quite possible that having experienced these benefits, organizations may be to reduce traditional (face-to-face) interviews (termed TI below) in favor of technology-mediated interviews also after it recedes.

Meanwhile, there is relatively little scientific research on these types of interviews, and their results are inconclusive (Woods *et al.,* 2020). Moreover, recently, more research has focused on asynchronous interviews which offer more flexibility and analytical possibilities (Langer *et al.,* 2017), than on synchronous ones, despite two important advantages of the latter. First, from an organizations' point of view, SVI can be considered as a natural replacement of TI. This concerns especially small and medium companies facing challenges in adapting to pandemic conditions, as the conversion to SVI can be made fast and with no infrastructure investment. Second, it also seems to be more natural for candidates who often have the daily experience of using this technology in private life, and may be reluctant to use AI in selection (Mirowska, 2020). Hence, the following study aims to supplement scientific knowledge in the field of SVI perception, i.e., this type of selection tool, the diffusion of which has been significantly accelerated by the pandemic requirements.

The aim of this work is to compare the acceptance of SVI and TI and to investigate what candidate characteristics influence the full acceptance of SVI as a selection tool. The current study is rooted in the „candidate perspective" that dominates this field of research, and uses the standard methodology of selection tools fairness analysis (Steiner and Gilliland, 1996).

The remainder of the paper is organized as follows: After a short review of the literature, hypotheses are put forward in section 2. Section 3 presents the research methodology, section 4 the results, and the 5th section summarizes the paper.

2. Literature Review and Hypotheses Development

The dominant perspective in the research on applicant reactions to the selection process is organizational justice theory represented by Gilliland's justice-based model. In this field of research the methodology introduced by Steiner and Gulliland (1996) prevails and their questionnaire, sometimes with minor modifications, has been used in many studies (Truxillo *et al.,* 2018). This questionnaire evaluates two dimensions of process favourability, perceived predictive validity and perceived fairness, and seven dimensions of procedural justice, scientific evidence (belief that the method is based upon scientific research), employers' rights to use this method, opportunity to perform (the degree to which the method can detect applicant's qualities differentiating him/her from others), interpersonal warmth (the degree to which the method is not considered as impersonal and cold), face validity, perceived widespread usage, and respectful of candidate's privacy.

The answers to the questionnaire questions are given on the basis of the candidate's opinion about the given selection tool, independent of the way the tool is used in a specific process, the scale and diversity of the candidate's experience with this tool, or other interests of the respondent as a candidate for a job. An additional limitation of this methodology, apart from putting the respondents in an imaginary situation, is the nonobvious linguistic meaning of some of the detailed questions for which the respondent may feel incompetent to answer (e.g. questions about scientific evidence or predictive validity).

TI is not only the most common selection tool, but also one of the most favourably evaluated in terms of process favourability and procedural justice (Truxillo *et al.,* 2018). In this text SVI will be understood as an interview over the internet with (nearly) real-time visual and audio connection between interviewer(s) and interviewee facilitated by a video conferencing system. First research on SVI, based mostly on student samples and usually conducted in laboratory settings (Blacksmith *et al.,* 2016), shows that TI is more favourably evaluated than technology-mediated interviews (Truxillo *et al.,* 2018; Blacksmith *et al.,* 2016). Authors of the first meta-analysis in this field indicate two causes for this restricted candidates' ability to impression management (what causes perception of unfairness), and perceiving technology-mediated tools as impersonal (Blacksmith *et al.,* 2016). On the other hand, video conferences are too widely used, also for private purposes, to assume negative fairness perception in all dimensions of applicant reactions (including employers right and face validity) as a natural reaction to novelty.

The experience of communicating through video conferencing systems (mostly Skype) is common among Poles - due to high emigration. Skype-type communication helps families maintain daily contact. It can be assumed that for Polish respondents perceived usefulness and ease of use (Venkatesh and Davis, 2000) are for SVI even higher as for TI, as not only travel costs but also other inconveniences related to the recruiter's location disappear.

However, the media richness theory indicates that the lower the richness of a given medium, the less accepted communication using it is (McCarthy *et al.,* 2017), which suggests a lower level of acceptance for SVI than for TI, at least in some respects, as some information is missing in the SVI format, which shows mostly a communication partner's face and facial movements, but not the rest of their body and its dynamics. Also the relative rarity of SVI in recruitment suggest its lower acceptability than TI. We can assume that for dimensions connected with these aspects, the assessment will be lower, but not – for other dimensions.

H1: As personnel selection tools, SVI will be evaluated lower than TI, although not on every dimension.

An argument for the preference of TI is its popularity, which might suggest to the respondents that since the less expensive SVI is not commonly used, then it is significantly worse as a tool accurately identifying appropriate job candidates.

H1a: SVI will be evaluated lower on perceived predictive validity than TI.

The rejection decision, even imaginary, triggers a sense of loss, and thus focuses the candidate's attention on the main potential shortcomings of the selection tool overstating their significance. Both types of interviews have a common disadvantage - potential subjectivity of the recruiter, so both interviews are expected to be similar in this regard.

H1b: SVI will not be evaluated significantly lower on perceived fairness than TI.

Belief that 'TI/SVI is based on solid scientific research' depends on the respondent's interpretation of 'solid scientific research' and expectations regarding the criteria for scientific validation of selection methods. Some respondents may be aware of the limitations of generalizing conclusions from interview validity studies. These factors should affect respondents' opinions on the "scientific evidence" of SVI and SI adequacy in the same way.

H1c: SVI will not be evaluated significantly lower on the scientific evidence criterion than TI.

TI, considering its more complete picture of the applicant's behavior and other social characteristics (e.g., adequate dress, following social norms of behavior in the office, etc.), should be perceived as higher on the face validity criterion. Thus:

H1d: SVI will be evaluated significantly lower on the face validity criterion than TI.

The respondents might believe that their ability to influence the recruiter via impression management techniques (behavioural techniques such as nonverbal behaviours, visual cues, patterns of speech, etc., that applicants use to positively

influence an interviewer's perception) are lower in SVI. This results from the limited possibility of influence through body language, difficulties in maintaining eye contact due to camera angles, as well as problems stemming from technical limitations – time lags and other effects of a poor quality of the Internet connections (Blacksmith *et al.,* 2016).

H1e: SVI will be evaluated lower on the opportunity to perform criterion than TI.

SVI and TI are both interactive, but they are not equivalent on social bandwidth (Potosky, 2008), as some signals of attitude towards the interaction partner are communicated by very small changes in behavior, not to be seen on the computer screen. Thus, SVI should be evaluated lower on the interpersonal warmth criterion, as a method unable to communicate all human attitude signals.

H1f: SVI will be evaluated lower on the interpersonal warmth criterion than TI.

SVI should not cause doubts as to the employers' right to use this method since it is used by some of them. However, a lack of clarity regarding the use of video recordings might lower the belief in SVI being as legal as TI. Thus:

 H1g: SVI will be evaluated significantly lower on the employer's right criterion than TI.

SVI offers higher level of the surveillance attribute than TI (anonymous observation, possibility of recording and accessing the recording) and common doubts regarding privacy on the Internet and discussions in the media suggest that respondents will consider SVI to respect their privacy less than TI.

H1h: SVI will be evaluated lower on the respect of privacy criterion than TI.

TI is the most frequently used selection method, of which the respondents are aware. Thus, a significant difference in evaluations on this dimension should be expected.

H1i: SVI will be evaluated lower on the wide use criterion than TI.

The second aim of the current study was to examine the predictors of SVI acceptance, i.e., positive evaluation on both process favorability dimensions. We put forward the following hypothesis:

H2: Predictors of acceptance of SVI as a selection method are gender, age, test anxiety, individual innovativeness, and previous individual experience with SVI.

The choice of predictors was guided by findings from the literature as follows.

Since women are generally more conservative and risk-averse than men (Shin *et al.,* 2020), it can be expected that they will be more negatively predisposed than men towards participating in atypical situations, such as an ICT-based selection.

Following the concept of digital natives (Prensky, 2001), we expected younger people to be more likely to accept modern communication tools, including SVI.

Research on text anxiety shows that its level influences the attitude towards the selection tools, especially to their new forms (McCarthy *et al.,* 2017).

Personal innovativeness in the domain of information technology is commonly understood as the willingness of an individual to try out any new information technology. Studies show a positive influence of this trait on the perceived usefulness and perceived ease of use of new technologies, including selection technologies (Oostrom *et al.,* 2013).

The hypothesis on the role of experience for acceptance of selection methods is consistent with previous research (Balcerak and Woźniak 2020). However, some studies (Snyder and Shahani-Denning, 2012) showed the differences between TI and SVI to be not statistically significant.

3. Research Methodology

An e-questionnaire was conducted on the ankietowo.pl portal in January 2019. This portal offers a very large panel of respondents rewarded in a gamified manner for their activities. Data collected from such portals are widely used for scientific purposes (Malik *et al.,* 2017), especially for surveys where the answers have to reflect primarily emotional feelings of respondents, despite the limitations resulting from the specific respondents' motivation. 448 persons completed the survey. After exclusion of those who have never worked professionally, the final sample consisted of N=427 subjects (70,5 % female). 38.6% of respondents had university degrees, 53,9% had at most high-school (secondary education) degrees, and 7.5% were still studying. The average age of the sample was 41.2 (SD = 13.3; min= 19; max = 74).

Process favorability and procedural justice dimensions were evaluated on seven-point scale (1- totally disagree; 7- totally agree) by items presented in Table 1. Test anxiety was measured with the test taken from Taylor and Deane (2002) with 5 items (e.g., 'During tests I feel very tense') evaluated on a 4-point Likert scale from 1 (almost never) to 4 (almost always), in which higher scores indicate higher levels of test anxiety. The Cronbach's α of the scale was 0.90. Individual innovativeness was measured with the shortened version of Individual Innovativeness Scale (Hurt *et al.,* 1977) taken from Hong *et al.* (2013). This version consists of 5 items (e.g., 'I would like to try all kinds of new inventions or new ideas' that are rated on a 7-point scale (1- totally disagree; 7- totally agree). The Cronbach's α of the scale was 0.88.

IBM SPSS Statistic software (ver. 26) was used to conduct all statistical analyses. The criterion for statistical significance was set at 5%.

4. Research Results

4.1. Hypothesis 1

To compare respondents' evaluations of the investigated dimensions, paired sample t-tests were performed (Table 1). The hypotheses concerning face validity (H1c) and employers right (H1g) were rejected. Furthermore, the effect sizes (d) for the differences in ratings on the respect of privacy and the interpersonal warmth criteria were small, which can be considered surprising due to limitations of social bandwidth and transparency in SVI-based communication and lower surveillance in TI. It is possible that respondents' growing familiarity with video conferencing systems in private communication is changing their perception of "direct contact."

Table 1. *Comparisons of process favourability and procedural justice dimensions for traditional and synchronous video interviews*

Dimensions and survey questions	TI M (SD)	SVI M (SD)	t(426)	Sig.	d
Predictive validity: '[…] is effective for identifying people qualified for the job'	4.71 (1.58)	3.82 (1.51)	9.40	<0.001	0.58
Fairness: 'If I did not get the job based on […], I would consider that selection procedure is fair'	4.15 (1.41)	4.14 (1.35)	0.18	0.85	
Scientific evidence: '[…] is based on solid scientific research'	3.96 (1.38)	3.95 (1.39)	0.13	0.89	
Face validity: '[…] is a logical method for identifying qualified candidates'	4.88 (1.41)	4.08 (1.46)	8.61	<0.001	0.56
Opportunity to perform: '[…] will detect the individuals' important qualities that differentiate them from others'	4.74 (1.42)	4.01 (1.42)	7.87	<0.001	0.51
Interpersonal warmth: '[…] is impersonal and cold' (reversed)	4.14 (1.52)	3.83 (1.41)	3.55	<0.001	0.21
Employers right: 'Employers have the right to obtain information by using […]'	5.19 (1.28)	4.48 (1.34)	8.73	<0.001	0.54
Respect of privacy: '[…] invades a candidate's personal privacy' (reversed)	4.61 (1.36)	4.25 (1.41)	4.57	<0.001	0.26
Wide use: '[…] is appropriate because it is widely used'	4.68 (1.32)	4.02 (1.34)	8.13	<0.001	0.50

Source: *Own study.*

4.2. Hypothesis 2

For the verification of H2, only data from respondents who evaluated both process favourability dimensions positive (scores from 5 to 7) or negative (scores from 1 to 3) were used. This reduced the sample to 169 subjects. To find the significant variables that influence positive evaluation of process favourability of SVI, a backward stepwise binary logistic multivariate regression analysis was performed. Descriptions

of dependent and independent variables are shown in Table 2. The elimination threshold was set at p>0.1.

Table 2. *Descriptions of variables used in logistic regression analysis*

Variable	Description	Mean (SD)
Process favorability (dependent var.)	1. Positive (n=88), 0 – Negative (n=81)	0.52 (0.50)
SVI experience	1 – Not experienced or not sure (n=104), 2 – Definitely experienced (n=65)	1.38 (0.49)
Gender	1 – Female (n=128) 2 – Male (n=41);	1.24 (0.43)
Age	Min=19; max=74	40.47 (12.50)
Test anxiety	Min=1; max=4	3.03 (0.94)
Individual innovativeness	Min=1; max=7	5.33 (1.25)

Source: *Own study.*

The iteration of the logistic regression analysis terminated at step 4 leaving two parameters in the model, i.e. *Individual innovativeness* (Exp(β)=1.47, 95% C.I. [1.13; 1.93], Wald χ^2 = 8.07, p=0.004) and *SVI experience* (Exp(β)=2.67, 95% C.I. [1.37; 5.02], Wald χ^2 = 8.34, p=0.004). The Hosmer-Lemeshow test revealed good fit with a value of 12.22 (p = 0.141).

The values of Exp(β) indicate that as *Individual innovativeness* and *SVI experience* increase, the odds of the positive evaluation of process favourability increase. The last model correctly predicts 60.5% of negative and 60.2% of positive evaluations. The Nagelkerke pseudo R^2 value is 0.14. Evidently, there are other factors influencing SVI acceptance than *Individual innovativeness* and *SVI experience*.

5. Conclusions

The aim of the study was to compare the acceptance of SVI and TI and to examine which candidate characteristics facilitate full acceptance of SVI as a selection method. It was found that the differences in perception of SVI and TI depend on the dimension being evaluated, and that for some dimensions, namely scientific evidence and fairness, the differences are not significant and the effect sizes for the differences in ratings on the respect of privacy and the interpersonal warmth criteria were small. This means that although SVI is evaluated more poorly in general than TI, on some dimensions there are no differences.

An analysis of the predictors of full (i.e., on both process favorability dimensions) SVI acceptance showed that only two of the participants' characteristics taken into consideration in the current study (i.e., individual innovativeness and former experience with SVI) were left in the model, which means that the demographic factors (gender, age) and test anxiety (a personality-socialization trait) do not significantly impact SVI acceptance.

The results of the current study have theoretical and practical implications. Regarding the former, they provide information about perception of ICT-based selection

methods, thus meeting McCarthy *et al.'s* (2017) postulate concerning the need for further studies on ICT acceptance. The specific result that demographic factors do not influence SVI acceptance provides an answer to Woods *et al.'s* (2020, p. 70) question: „Are there generational or other relevant demographic differences in applicant reactions to digital selection procedures?" An additional value of the study was its location in a region that is underrepresented in studies on selection method fairness (Ispas *et al.,* 2010), namely Poland, an Eastern European country.

The study allows us to draw several conclusions regarding practical implications. Since experience with SVI is increasing due to its widespread use during the pandemic, it should be expected that acceptance of this method will increase, especially among innovative candidates. Since demographic factors are not a barrier to SVI acceptance, it can be expected that the use of this tool, due to the benefits it brings to both sides of the process, will not be detrimental to a "candidate's selection experience", but rather will improve the organization's image as being concerned with candidate wellbeing. An additional argument behind the claim that using SVI as a selection tool will soon become accepted by candidates is relatively small difference in ratings on the personal warmth dimension. However, the pandemic period, in which so many people daily take part in video conferences, should also show up the shortcomings of this method, so more studies are needed.

Further studies are also required to give us an understanding of the Polish potential job candidates' surprisingly low sensitivity towards issues of privacy related to technologically mediated communication. The difference in perceiving SVI as more harmful to a candidate's privacy than TI was small, which suggests either that participants understand this form of interview in a specific way (as only a conversation mediated by remote communication), or that concerns regarding risk to personal privacy stemming from possibility of conversation recording are low (andcould mean a high level of trust of potential candidates in Poland towards recruiters and selection procedures).

It has to be clearly stated that the current data does not allow us to draw decisive conclusions. Although varied with respect to the measured variables, the current sample was not representative. Another limitation of the current results for predicting reactions of real-life job candidates is fact that Gilliland and Steiner's methodology is over 30 years old, and thus was designed in a period where the variability in selection methods was low, and the status of science in society was higher than it is currently.

As a result, the social meaning of some of the questions (e.g., regarding scientific evidence and face validity) has changed. This suggests the necessity of carrying out more extensive studies on the methodology of selection fairness studies themselves, or at least - as was done in the current study - analyzing each criterion in separation in order to formulate practical implications.

References:

Bacerak, A., Woźniak, J. 2020. Process favorability for different types of selection methods, In: K.S. Soliman (Ed.) Education Excellence and Innovation Management: A 2025 Vision to Sustain Economic Development during Global Challenges, 14832-14842.

Blacksmith, N., Willford, J.C., Behrend, T.S. 2016. Technology in the employment interview: A meta-analysis and future research agenda. Personnel Assessment and Decisions, 2(1), 12-20.

Hong, J.C., Hwang, M.Y., Ting, T.Y., Tai, K.H., Lee, C.C. 2013. The Innovativeness and Self-Efficacy Predict the Acceptance of Using iPad2 as a Green Behavior by the Government's Top Administrators. TOJET, 12(2), 313-320.

Hurt, H.T., Joseph, K., Cook, C.D. 1977. Scale for the measurement of innovativeness. Human Communication Research, 4(1), 58-65.

Ispas D., Ilie A., Iliescu D., Johnson R.E., Harris M.M. 2010. Fairness Reactions to Selection Methods: A Romanian study. International Journal of Selection and Assessment, 18/1, 102-110.

Langer, M., König, C.J., Krause, K. 2017. Examining digital interviews for personnel selection: Applicant reactions and interviewer ratings. International Journal of Selection and Assessment, 25(4), 371-382.

Malik, A.R., Singh, P., Chan, C. 2017. High potential programs and employee outcomes: The roles of organizational trust and employee attributions. Career Development International, 22/7, 772-796.

McCarthy J.M., Bauer D.M., Truxillo T.N., Anderson N.R., Costa A.C., Ahmed, S.A. 2017. Applicant Perspectives During Selection: A Review Addressing "So What?," "What's New?," and "Where to Next?". Journal of Management, 43/6, 1693-1725.

Mirowska, A. 2020. AI evaluation in selection: Effects on application and pursuit intentions. Journal of Personnel Psychology, 19(3), 142-149.

Oostrom, J.K., Van Der Linden, D., Born, M.P., van der Molen, H.T. 2013. New technology in personnel selection: How recruiter characteristics affect the adoption of new selection technology. Computers in Human Behavior, 29(6), 2404-2415.

Potosky, D. 2008. A conceptual framework for the role of the administration medium in the personnel assessment process. Academy of Management Review, 33(3), 629-648.

Prensky, M. 2001. Digital Natives, Digital Immigrants, Part 1. On The Horizon, 9(5) 1-6.

Shin, Y.Z., Chang, J.Y., Jeon, K., Kim, K. 2020. Female directors on the board and investment efficiency: evidence from Korea. Asian Business & Management, 19, 438-479.

Snyder, J., Shahani-Denning, C. 2012. Fairness Reactions to Personnel Selection Methods: A Look at professional in Mumbai, India. International Journal of Selection and Assessment, 20(3), 297-307.

Steiner, D.D., Gilliland, S.W. 1996. Fairness Reactions to Personnel Selection Techniques in France and the United States. Journal of Applied Psychology, 81, 124-141.

Taylor, J., Deane, F.P. 2002. Development of a short form of the Test Anxiety Inventory (TAI). The Journal of General Psychology, 129(2), 127-136.

Truxillo, D.M., Bauer, T.N., McCarthy, J.M., Anderson, N.R., Ahmed, S. 2018. Applicant perspectives on employee selection systems. In: D.S. Ones, N.R. Anderson, C. Viswesvaran, H.K. Sinangil (Eds.), The handbook of industrial, work and organizational psychology. Thousand Oaks, CA: Sage, 508-532.

Venkatesh, V., Davis, F.D. 2000. A theoretical extension of the technology acceptance model: Four longitudinal field studies. Management Science, 46(2), 186-204.

Volberda, H.W., van den Bosch, F.A., Mihalache, O.R. 2014. Advancing management innovation: Synthesizing processes, levels of analysis, and change agents. Organization Studies, 35(9), 1245-1264.

Woods, S.A., Ahmed, S., Nikolaou, I., Costa, A.C., Anderson, N.R. 2020. Personnel selection in the digital age: a review of validity and applicant reactions, and future research challenges. European Journal of Work and Organizational Psychology, 29(1), 64-77.