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## Sharing older workers among organizations: a vignette study investigating organizational, relational and task characteristics

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### ABSTRACT

With the aging of the workforce, organizations are face with the question how to ensure the employability of their older workers. To date, most of the research focuses on internal policies and practices (training, work load reduction, and so on). This study explores an external option, namely hiring older workers from other organizations and sending older workers to another organization. Based on theories about cooperation between organizations, four hypotheses are formulated (about characteristics of the organizations, the task of the worker and the relationship between the organization). These hypotheses were tested using a vignette study. Evidence was found for three main conditions for the willingness to hire and send older workers, namely: absorptive capacity, measurable tasks, and trust between organizations.

### KEY WORDS

inter-organizational cooperation, prisoner's dilemma, absorptive capacity, task measurability, trust, network size

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## 1 INTRODUCTION

Employability has a central place in discussions about the labor market and the human resource policies of organizations (McQuaid & Lindsey, 2005). There are several reasons for the increasing attention for employability, such as a shortening of time that employees spend at the same organization, increased job insecurity and the replacement of jobs through the introduction of robots in the workplace (Frey & Osborne, 2013; Koster & Fleischmann, 2017). At the same time, in many countries the workforce is aging, as a result of two developments, namely (1) a demographic change of greying coupled with decreasing numbers of younger workers; and (2) government decisions aimed at prolonging the careers of people. As a result, attention for what organizations, workers and governments can do to ensure that people are able and willing to stay in the workforce has been growing (De Grip, Van Loo & Sanders, 2004).

Prior research of human resource practices aimed at prolonging the careers of older workers mainly focused on the development of human capital of older workers through training and education and decreasing their workload (Picchio & Van Ours, 2011; Fleischmann, Schippers & Koster, 2015). These options are internally oriented as they focus on what the options are within a single organization. Nevertheless, organizations can also opt for external ways to increase the employability of their workforces (Gardner, 2005). Among such external human resource policies is the creation of ties with other organizations and to exchange workers between organizations. There are several advantages for doing that. First, it is a means to increase the human capital of workers as they have the ability to learn in different workplaces as they perform different jobs. Secondly, it helps organizations to optimize the match between job demand and job supply; if a worker becomes obsolete, for example due to a change in the job structure of the organization, this worker may find employment in another organization that is part of the exchange network, and if an organization is in need of workers with certain skills, they may find them through the exchange network. As such, these exchange networks function as a means to share knowledge among organizations.

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Despite that exchanging workers between organizations has benefits for organizations and workers, there are also risks associated with developing exchange relations with other organizations. For example, the costs may be higher than the benefits, it may be time consuming, valuable resources and information may move to other organizations, other organizations in the network may act opportunistically, and so forth (Pouwels & Koster, 2017). These risks stem from the cooperation problem between organizations resulting from the prisoner's dilemma situation in which they act (Axelrod 1984). Hence, additional mechanisms need to be in place to ensure that organizations are willing to participate in such exchange networks with other organizations.

In this study we examine a number of these mechanisms and investigate whether they explain the likelihood of exchanging workers between organizations. Both sides of the exchange are investigated: hiring workers from other organizations as well as sending workers to other organizations. We apply a vignette study to study how the mechanisms are related to the intention to participate in an exchange network. A vignette study is a semi-experimental design in which conditions are randomly assigned to respondents (Alexander & Becker, 1978). A major advantage of this approach is that it allows investigating whether and how these conditions affect the choices that actors make. In this particular study, the actors are (human resource) managers making decisions regarding the hiring and sending of workers. These data are used to test four distinct hypotheses about conditions favoring the exchange of older workers.

## 2 THEORETICAL FRAMEWORK

Sharing workers among organizations is not a very common part of the literature on human resource practices. Instead, a large share of the human resource management literature focuses on the internal policies and practices that organizations apply to create a fit between individuals and the organization (e.g. Huselid, 1995; Koster, 2011). Certainly, recruitment and selection are among the instruments that organizations use to attract new personnel. While this requires that organizations look beyond their boundaries, this is something different than creating ties with organizations to exchange workers. Establishing such ties means collaboration closely with other organizations, whereas selection requires only one organization that tries to find external human capital.

The more general literature about inter-organizational relations and cooperation (Dodgson, 1996; Haunschild & Miner, 1997; Ahuja, 2000; Inkpen & Tsang, 2005; Easterby-Smith, Lyles & Tsang, 2005), which usually focuses on matters such as collaboration between organizations to develop new products and services, provides insights that are relevant for the exchange of workers between organizations. Theoretically, such collaborations can be analyzed as a game-theoretic problem. Organizations exchanging knowledge and workers find themselves in a prisoner's dilemma situation (Axelrod, 1984): while both organizations may benefit from the exchange, the structure of the game may withhold them from cooperation. The benefits include an increase in the stock of knowledge of the organizations (as experiences and skill from outside the organization become available) as well as an improved use of human capital (as worker move from one organization to another, the job-person fit may improve, meaning that workers are better able to perform in their job). Nevertheless, there is a downside to opening up the organization to outside forces. For example, the organization may lose valued knowledge (which was developed within the organization) and individuals that are regarded core workers may choose to work elsewhere. Hence, organizations may want to shield off their stock of knowledge and binding workers to their organization, which Becker already noted when he developed the idea of human capital and why organizations would be interested in investing in it. One of the main reasons is that future interactions are needed between the organization and the worker for these investments to pay off (Becker, 1964). This can, again, be framed as a prisoner's dilemma: while the organization and the worker both are better off if there are investments in human capital, the tendency may be to underinvestment.

While many cooperation problems resemble the structure of a prisoner's dilemma (Axelrod, 1984), a bulk of research is now available showing that actors can solve these problems if certain conditions are met (see for example Kollock, 1998 and Nowak & Highfield, 2011). The present study examines a number of these conditions, by focusing on (1) organizational characteristics, (2) characteristics of the task, (3) characteristics of the relationship between the sending and receiving organization and (4) the network in which the organizations operate. Each of these characteristics may solve a part of the prisoner's dilemma. First, if organizations are better able to find the right – cooperative – partner for the exchange, the exchange becomes less risky (Nooteboom, 2000). Second, if there is enough clarity about the tasks to be performed, there is less uncertainty associated with the exchange (Cable & Shane, 1997). Third, if organizations already have a trusting relationship with each other, there is more positive information about the motives and actions of the other organization, decreasing the likelihood of opportunistic behavior of the other organization (Gulati, 1995). And, fourth, the likelihood of opportunistic behavior is larger, the smaller the number of potential exchange partners, as transaction cost theory would predict (Williamson, 1991; Vanhaverbeeke, Duyster & Noorderhaven, 2002).

Given that there are different aspect associated with the exchange of older workers among organizations that may increase or decrease the likelihood of cooperation as the presence or absence of the above conditions can vary, the analysis does not focus on a single condition, but will investigate to what extent they matter in this specific prisoner's dilemma situation (Easterby-Smith, Lyles & Tsang, 2005; Van Wijk, Jansen & Lyles, 2008). Hypotheses are specified for each of these conditions.

With regard to the ability of organizations to scan their environment and to have knowledge about what they need to perform well, their absorptive capacity is a relevant factor. Absorptive capacity refers to the capability of organizations to recognize the value of the knowledge they need, to process this knowledge, and to apply it in the organization (Cohen & Levinthal, 1990; Nooteboom, 1994). Having this capability helps organizations to have a clear vision about the knowledge they require as well as the kind of knowledge that may be (temporarily) obsolete within to organization. What is more, organizations possessing absorptive capacity may also be better able to estimate what kind of knowledge other organizations require. In terms of the prisoner's dilemma situation, this means that these organizations should be better able to find a suitable partner (both in terms of how valuable the stock of knowledge and people is within that organization as well as in terms of how trustworthy the other organization is) to develop an exchange relationship (Grunfeld, 2003; Gulati, 2007). Hence, the first hypothesis reads as follows.

*Hypothesis 1: The likelihood of hiring an older worker from another organization or sending one to another organization is higher, the higher the absorptive capacity of an organization.*

The ease with which workers can be transferred from one organization to another is also expected to depend on the kind of knowledge they apply in their work. Tasks can be classified by the extent to which the knowledge that it requires is tacit or not. Tacit knowledge is less easy to measure and monitor since it is embodied in the person (Polanyi, 1958). Furthermore, the more the knowledge is organization specific, the less easily it can be transferred to other organizations. Prior research regarding the transfer of knowledge between organizations also finds that tacit knowledge is less easily transferred (Lam, 1997; Simonin, 1999; Levin & Cross, 2004; Szulanski, Capetta & Jensen, 2004). Tasks that are harder to measure may be vulnerable to cooperation problems, for example because employees act opportunistically (e.g. working less hard than possible), hence increasing the cooperation problem and the severity of the prisoner's dilemma. Exchanging workers performing tasks that are easier to monitor, are more likely to be transferred than those doing tasks that are difficult to measure these exchanges are less vulnerable to cooperation problems (Adler, 2001). This argument leads to the next hypothesis.

*Hypothesis 2: The likelihood of hiring an older worker from another organization or sending one to another organization is higher, the higher the measurability of the task of the worker.*

Network theories emphasize that the relationships between organizations matter for understanding their level of cooperation, as they can be a condition solving the prisoner's dilemma (Raub, 2017). These relationships can create trust through learning and control mechanisms. And, in turn, trust relationships between organizations are a solution to cooperation problems between organizations (Rooks, Raub, Selten & Buskens, 2000). To a certain extent, these trust relations develop over time between organizations. This solution to the cooperation problem focuses on the dyad between two parties (Koster & Sanders, 2007). However, these dyadic relations can in turn be part of a larger network. And, research shows that third party relationships also matter for the creation of trust. Being embedded in a network, having the possibility to share knowledge among organizations, further strengthens trust relations (Granovetter, 1985; Gulati, 1998). Therefore, a trust hypothesis is posed.

*Hypothesis 3: The likelihood of hiring an older worker from another organization or sending one to another organization is higher, the higher the level of trust in the other organization.*

A fourth mechanism that was found to matter in earlier research on inter-organizational relations and that focuses on the dynamics between organizations (Easterby-Smith, Lyles & Tsang, 2005), concerns the size of the exchange network. As was found in prior studies, the size of the exchange network matter because of the extent to which it allows for opportunistic behavior to occur. Transaction cost theory (Williamson, 1991) argues that the more parties are dependent on each other and do not have an exit-network increase chances of opportunistic behavior. On the other hand, this means that the larger the network is, the less dependent organizations are on a single partner, and hence they have more options to choose from. Besides that, the larger the network becomes, the more possibilities there are to find a match (Gulati, 1997). Hence, the last hypothesis states that the size of the network matters for the exchange of older workers.

*Hypothesis 4: The likelihood of hiring an older worker from another organization or sending one to another organization is higher, the larger the exchange network of the organization.*

### 3 DATA AND METHOD

The data for this study were gathered using a vignette study (Alexander & Becker, 1978; Hughes, 1998). In a vignette study, respondents read information about a certain choice situation (in this particular study, about sending and receiving workers). The description of the situation is the same for all respondents. By randomly varying conditions (in this case information about the other organization, the type of work, and the relationship with the other organization), it is possible to investigate how these conditions affect the choices of respondents. By randomizing the conditions, different situations are created. As a result, it is possible to assign several vignettes to one respondent. In this study, respondents were asked to read and rate 8 different vignettes (4 regarding the hiring of a worker and 4 about sending a worker to another organization). Respondents were approached via the professional network of the researchers: people were invited to participate through email and LinkedIn connections. An important restriction for participating in this study was that the respondent should be active as a line manager or a human resource manager within an organization. This restriction was placed to be sure that people participated who have knowledge and experience with managing people within organizations. While this strategy does not lead to a random selection of (human resource) managers, this may be less of a problem in a vignette study. The intention of the present analysis is not provide an estimate of how the average manager would deal with the situation at hand (which would require a random sample of the population), but to find out whether the exchange of older worker depends on the four characteristics hypothesized above. By randomly assigning these conditions to the respondents, the analysis allows to investigate these effects. In total 73 managers participated in this study, which amount to 584 completed vignettes.

The vignettes are developed in a number of steps. In the first stage of the research, a rough set-up was created using theoretical insights, as well as experiences with previous vignette studies and information from informal interviews with managers. This set-up was discussed with a panel of 5 researchers who were all working on topics relating to the employability of older workers. These researchers have knowledge about the topic of interest (sharing older workers) as well experience with vignette studies. Their input was used to further develop the vignettes. Finally, a test was run with 5 people to see whether they understood the situation and the conditions. This final step led to some small changes in the wording of the vignettes and the conditions (mainly by further simplifying the descriptions). To be sure that the participants understood the vignettes and the conditions, all of them have been operationalized in "layperson" terms; theoretical terms have been not been used (see table 1 and 2 for details).

#### 3.1 DESCRIPTION OF THE SITUATION

Two different situations are described. First the respondents received the situation about hiring older workers. After completing these vignettes, they read the situation about sending one of their older workers to another organization. In other words, two sides of the prisoner's dilemma are investigated and it is examined whether different considerations play a role here. The precise descriptions are shown in table 1.

Table 1: Description of the two situations

<p><b>Situation: Hiring older workers to another organization</b></p> <p><i>Try to imagine the following situation:</i></p> <p>You are a manager at organization Y. And like many organization, you aim at increasing the employability of older employees in the organization. There are different ways of achieving that. Hiring workers from other organizations for a fixed time is one of these options as it enables the older workers to learn new things at a different workplace. At the same time, your organization may benefit from this since it acquires new knowledge. Hiring a worker from another organization may be risky, since you do not know how much the worker will contribute to your organization.</p>
<p><b>Situation: Sending older workers to another organization</b></p> <p><i>Try to imagine the following situation:</i></p> <p>You are a manager at organization Y. And like many organization, you aim at increasing the employability of you older employees. There are different ways of achieving that. Sending your workers to another organizations is one of these options as it enables the older workers to learn new things at a different workplace. The other organization (organization X) may benefit from that because they receive an experienced worker that can contribute to the stock of human capital within that organization. At the same time, sending the worker to the other organization may be risky, since you do not know how discrete the receiving organization deals with confidential information that the worker may possess.</p>



### VIGNETTE CONDITIONS

After reading the description of the situation, the respondents read the (randomly selected) vignette conditions. These conditions reflect the absorptive capacity of the organizations, the measurability of the task, the dynamics of the organization, and a control condition (size of the organization). The measures of the conditions are reported in table 2. Since there are some small differences between the wording of the sending situation and the receiving situation, both are reported.

Table 2: Overview of the conditions

Variable	Conditions	Description on the vignette (hiring)	Description on the vignette (sending)
Absorptive capacity	High	The capability of your organization to estimate which knowledge is needed is high.	The capability of your organization to recognize valuable knowledge is high
	Low	The capability of your organization to estimate which knowledge is needed is low.	The capability of your organization to recognize valuable knowledge is low
Measurability of the task	High	The output of the employee is easy to measure	The output of the employee is easy to measure
	Low	The output of the employee is not easy to measure	The output of the employee is not easy to measure
Trust in the other organization	High	From other organizations you received positive information about organization X	From other organizations you received positive information about organization X
	Moderate	You do not know other organizations that know organization X	You do not know other organizations that know organization X
	Low	From other organizations you received negative information about organization X	From other organizations you received negative information about organization X
Number of exchange partners	Many	Your organization has a large number of ties with other organizations to hire employees from.	Your organization has a large number of ties with other organizations to send employees to.
	Little	Your organization has a few ties with other organizations to hire employees from.	Your organization has a few ties with other organizations to send employees to.
	None	Your organization has no ties with other organizations to hire employees from.	Your organization has no ties with other organizations to send employees to.

### CONTROL VARIABLES

Several control variables are added to the analyses. These control variables are situated at the vignette level and the individual/organizational level.

### CONTROL VARIABLE VIGNETTES

The variable organizational size is measured by adding that the respondent works for a small organization (defined a less than 10 employees) or a larger organization (defined as 10 or more employees). The rationale about this is that the tendency to hire or receive workers may be lower in smaller organizations.

### INDIVIDUAL CONTROL VARIABLES

The respondents answered a number of questions about individual characteristics and characteristics of their organization. *Gender* is measured as male (0) and female (1). Educational level is measured by asking the respondent about the highest *level of education* completed, ranging from (1) basic schooling to (7) university degree (recoded into three categories, namely low, medium and high), *organizational size* was measured by asking how many employees work for the organization, the frequency of contact with older worker that the respondent has (ranging from 1 = daily to 5 = almost never). *Perceptions about older workers* was measured by asking to what extent respondents agree with the statement that workers become less productive as they grow older (1 = completely disagree and 9 = completely agree) (Loretto & White, 2006). Finally, respondents were asked whether they could identify with the two situations (ranging from 1 not at all to 9 completely).

### DEPENDENT VARIABLES

After reading the vignette situation and the conditions, respondents are asked to rate on a scale from 1 to 9 whether they are prepared to hire the employee from the other organization (or to send the employee to the other organization, depending on the vignette situation they read). This measure runs from “not likely at all” (1) to “very likely” (9).

### 3.2 RESPONDENTS

In total, 50 men (68%) and 23 (32%) women participated. Their age ranged from 19 to 61 years (with an average of 40). Most respondents have a higher education (almost 75%). The majority of the respondents (43%) is employed at an organization of 250 and more employees. A large share (70%) of the respondents is in daily contact with older workers. Although the respondents are active in different sectors, it was not possible to focus on sector differences too much, given that there are too little respondents in each of the sectors. The average score of the statement whether respondents think that workers become less productive is 4.9. And, the average of the question whether they could identify with the situation described in the vignette is 5.6 (on a scale from 1 to 9).

Since the respondents are from the Netherlands, it may be that institutional and cultural aspects that influence the results. While investigating whether this matters, requires a comparative approach (conducting the research in multiple countries), there is some information about the likelihood of organizations to cooperate (to design, produce or market goods and services) in a comparative perspective. Based on an analysis of the European Company Survey (Koster, 2015), it was shown that organizations in the Netherlands are very close to the average with regard to cooperation with other organizations. On average the mean of organizations cooperating with other organizations is between 59-66 percent, organizations in the Netherlands score between 62-68). Germany scores considerably lower (43-51 percent) and the rate of cooperation is much higher in Finland (84-91). Based on this information, it is assumed that the results provide insight from an average country (with regard to organizational cooperation).

### 3.3 METHOD OF ANALYSIS

The data are analyzed using multilevel analysis. This method accounts for the nested structure of the data (vignettes are nested within individuals) (Hox, 2002). Since the individual characteristics of the respondents are not independent from each other, OLS regression analysis cannot be applied.

The data are analyzed in a number of steps. First, an empty model (without independent variables) is estimated, which serves as a baseline model. In model 1, the control variables are added. And, the final model includes the vignette conditions that test the hypotheses. The data are analyzed in 3 different multilevel regressions. In the first model (represented in table 3) all responses are combined. Since there is the possibility that people respond differently to the sending situation than to the receiving situation, the multilevel regression analyses are also performed separately for the two situations. The results of these analyses are reported in table 4. The final models intend to investigate whether the vignette conditions affect the two different choices differently.

For each model, the  $-2 \cdot \log$  likelihood is calculated. The deviance of the models refers to the difference between the log likelihoods of the models. The deviance is used to estimate whether the model improves after adding the variables. The deviances has a chi squared distribution and the degrees of freedom reflect the number of added variables (Hox, 2002).

## 4 RESULTS

The model in table 3 starts with investigating whether the control variables affect the choices of the respondents. This is not the case. Adding these variables does not improve the fit of the model (the deviance is not statistically significant) and none of the independent variables is statistically significant. Adding the conditions that test the four hypotheses improves the fit of the model (deviance = 226.12;  $p < 0.001$ ). In the second model reported in table 3, the conditions measuring the hypotheses are added. The absorptive capacity of organizations positively affects the choice to send and receive older workers ( $b = 0.34$ ;  $p < 0.05$ ). The measurability of the task also contributes to the likelihood of sending and receiving older workers ( $b = 0.96$ ;  $p < 0.001$ ). The level of trust is positively related to sending and receiving older workers. If trust is high, the change of sending and receiving older workers is significantly higher than in the moderate trust condition ( $b = 1.50$ ;  $p < 0.001$ ). Furthermore, compared to the moderate trust condition, the no trust condition is significantly lower ( $b = -1.22$ ;  $p < 0.001$ ). The size of the exchange network is does not have a statistically significant effect on sending or receiving older workers.

Table 3: Multilevel analyses of hiring and sending combined

	(1)		(2)	
	b	(s.e.)	b	(s.e.)
Individual (level 2)				
Background characteristics				
Gender (1 = female)	-0.34	0.29	-0.35	0.30
Age	0.01	0.13	0.00	0.01
Educational level				
Low (reference)	-	-	-	-
Moderate	-0.01	1.17	-0.24	1.21
High	0.70	1.16	0.46	1.19
Organizational size own organization				
Small (reference)	-	-	-	-
Moderate	0.02	0.40	-0.11	0.41
Large	-0.13	0.35	-0.25	0.36
Contact older workers				
Almost never (reference)	-	-	-	-
Monthly	-0.03	0.38	-0.03	0.39
Weekly	0.42	0.70	0.35	0.71
More than once a week	0.18	0.51	0.01	0.52
Daily	-0.22	0.71	0.16	0.73
Norms				
View of older workers	-0.00	0.07	-0.01	0.07
Vignette control				
Identification with vignette	0.08	0.07	0.04	0.07
Vignette (level 1)				
Organizational size vignette situation	0.32	0.18	-0.20	0.15
Absorptive capacity			0.34 *	0.15
Measurable task			0.96 ***	0.15
Trust in other organizations				
Moderate (reference)			-	-
High trust			1.50 ***	0.18
Low trust			-1.22 ***	0.18
Size exchange network				
Moderate (reference)			-	-
Large			-0.27	0.17
None			-0.01	0.18
Intercept	3.91 **	1.34	4.07 **	1.40
Model fit				
-2*log likelihood		2572.02		2345.90
Deviance	11.81		226.12 ***	
Variance level 2	0.65 **	0.20	0.92 ***	0.21
Variance level 1	4.34 ***	0.28	2.76 ***	0.17

Empty model: -2\*log likelihood = 2583.83; level 2 = 0.80\*\*\* (0.23); level 1 = 4.37\*\*\* (0.27)

\* = p < 0.05; \*\* = p < 0.01; \*\*\* = p < 0.001

N = 73 respondents; 584 vignettes

Table 4: Multilevel analyses of hiring and sending separately

	(1)		(2)	
	b	(s.e.)	b	(s.e.)
Individual (level 2)				
Background characteristics				
Gender (1 = female)	-0.18	0.35	-0.52	0.37
Age	0.01	0.02	0.00	0.02
Educational level				
Low (reference)	-	-	-	-
Moderate	0.07	1.40	-0.69	1.52
High	0.75	1.38	0.05	1.49
Organizational size own organization				
Small (reference)	-	-	-	-
Moderate	-0.15	0.48	-0.03	0.52
Large	-0.42	0.42	0.02	0.46
Contact older workers				
Almost never (reference)	-	-	-	-
Monthly	-0.15	0.45	0.12	0.49
Weekly	0.25	0.82	0.38	0.89
More than once a week	0.63	0.60	-0.57	0.65
Daily	-0.06	0.84	0.31	0.91
Norms				
View of older workers	-0.12	0.08	0.12	0.09
Vignette control				
Identification with vignette	0.04	0.09	0.05	0.09
Vignette (level 1)				
Organizational size vignette situation	0.12	0.19	0.17	0.21
Absorptive capacity	0.41 *	0.19	0.27 *	0.20
Measurable task	1.35 ***	0.19	0.44 ***	0.20
Trust in other organizations				
Moderate (reference)	-	-	-	-
High trust	1.16 ***	0.19	1.51 ***	0.25
Low trust	-1.47 ***	0.23	-0.92 ***	0.24
Size exchange network				
Moderate (reference)	-	-	-	-
Large	-0.13	0.22	-0.26	0.24
None	-0.19	0.23	0.07	0.25
Intercept	3.94 *	1.62	4.38 *	1.75
Model fit				
-2*log likelihood	1121.68		1163.41	
Deviance	165.33 ***		87.38 ***	
Variance level 2	1.18 ***	0.29	1.40 ***	0.34
Variance level 1	2.02 ***	0.19	2.32 ***	0.22

Empty model hiring: -2\*log likelihood = 1293.74; level 2 = 1.43\*\*\* (0.41); level 1 = 3.93\*\*\* (0.38)

Model 1 hiring: -2\*log likelihood = 1287.01; level 2 = 1.00\*\*\* (0.34); level 1 = 3.90\*\*\* (0.37)

Empty model sending: -2\*log likelihood = 1260.89; level 2 = 1.54\*\*\* (0.40); level 1 = 3.39\*\*\* (0.32)

Model 1 sending: -2\*log likelihood = 1250.79; level 2 = 1.22\*\*\* (0.35); level 1 = 3.40\*\*\* (0.33)

\* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

N = 73 respondents per model; 292 vignettes

Table 4 shows the results for the separate analyses of sending and receiving older workers. Again, the control variables are not statistically significant and therefore the models with the control variables are not reported. The overall pattern is similar: absorptive capacity, measurability of the task, and trust between the organizations explains their willingness to hire and receive older workers. And, in both models, the size of the network does not have an



effect. Comparing the parameters between the models (by adding an interaction between a dummy for “receiving” with the vignette conditions; not shown here), shows that the measurability of the tasks a significantly stronger predictor of hiring an older worker compared to sending an older worker to another organization.

Taken together, these results support hypothesis 1 (absorptive capacity), 2 (task measurability), and 3 (trust between organizations), and hypothesis 4 (size of the exchange network) is refuted.

## 5 DISCUSSION AND CONCLUSION

In this study four conditions for sharing older workers among organizations were investigated. Sharing older workers is conceptualized as a prisoner’s dilemma in which organizations can choose to cooperate by sharing these workers or to defect by not doing that. The vignette analysis shows that absorptive capacity, task measurability and trust between organizations explain why organizations would be willing to hire older workers from other organizations and to send them to other organizations. These findings are generally in line with more general theories of inter-organizational collaboration and knowledge sharing (Easterby-Smith, Lyles & Tsang, 2005; Van Wijk, Jansen & Lyles, 2008).

Of course, this is not to say that this study does not contribute to the existing knowledge. There are three very specific contributions to the literature. First, these previous studies focused on far more general and strategic issues than the one under study here, namely sharing human resources among organizations. This domain of human resource management is pretty much underdeveloped, largely because most of the research is internally focused and aimed at revealing the human resource practices that contribute to the functioning of organizations and workers. In that sense, this research contributes to completing the human resource architecture, which consists of internal and external strategies to optimize human capital in organizations (Lepak & Snell, 1999). Secondly, and in addition to the first point, this research opens a new way of looking at employability research. This field of research generated a large number of insights concerning the role of employers and workers in increasing employability in the light of ageing societies (Fleischmann & Koster, 2018), but so far, little attention is paid to exchanging workers (rather than firing them). In that sense, the present study breaks ground for a further investigation of external strategies to enhance employability. The final contribution lies in the empirical information that this study generates. Several of the models to which this study refers remain theoretical and have not been (fully) tested. By conducting a vignette study, we were able to investigate the strengths and weaknesses of these proposed models. As we have seen, they hold to a certain extent. Nevertheless, the study also shows that the strength of the determinants of sharing older workers varies. And, while it was expected that size of the exchange network would also matter, this turns out not to be the case. A possible explanation for this is that multiple mechanisms are at work: whereas a larger network is associated with more potential exchange partners, it also means that it leads to more difficulties regarding cooperation between organizations (for example because opportunistic behavior more frequently occurs). If there are indeed to opposing mechanisms at the work, the overall effect is zero. This would need further inspection in a follow-up study.

A distinction was made between the two sides of the exchange network, namely hiring older workers and sending older workers to other organizations. The results show that making this distinction does not really matter as the condition favoring hiring are also the ones contributing to sending older workers. This provides support for the idea that hiring and sending older workers is a matter of cooperation between organizations. The three conditions found in this study provide solutions to potential cooperation problems resulting from the prisoner’s dilemma situation underlying it.

Despite the strengths and contributions of this study, the outcomes should be considered with the following in mind. First, while a vignette study is valuable in finding out whether theoretical conditions work or not, their outcomes should always be complemented with qualitative and quantitative fieldwork to see how the topic under study works in real life. This should for example lead to cases illustrating the findings of this study. Secondly, a larger dataset is needed to give more detail to the findings. It may be that managers from different sectors and organizations respond differently to the vignette conditions, but this could not be tested in this study. Finally, the data were collected in the Netherlands. Beforehand, there is not reason to assume that similar conditions would not apply to other countries. It is, however, possible that their importance varies between countries, for example due to labor market and other institutions. This last point would be a call to researchers in other countries to conduct a similar vignette study and compare the results.

Finally, this article started with the premise that organizations may use external exchange networks to increase the employability of their older workers. The present study shows that this is indeed possible. The outcomes suggests that organizations looking for human resource practices to prolong the careers of their older workers can also look for external options. At least three conditions should be met to facilitate the exchange network: organizations should develop their capability to scan and recognize valuable knowledge, the exchange should focus on particular workers (with measurable tasks) or additional mechanisms should be created, and exchange partners need to spend time and energy in creating trust relations.

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