Engagement of citizens and public professionals in the co-production of public services

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CHAPTER 5

Public professionals' engagement in co-production: Dutch elderly care managers' perceptions on collaboration with client councils

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Chapter 5 – Public professionals' engagement in co-production: Dutch elderly care managers' perceptions on collaboration with client councils

ABSTRACT

In the context of public service delivery, public professionals nowadays intensively collaborate with citizens. The joint, sometimes mandatory, efforts of citizens and professionals to provide public services have become known as 'co-production'. Although co-production directly affects professionals' work environment, professionals' attitudes towards co-production are hardly studied. This chapter explains variation in professionals' engagement in co-production from characteristics of their work environment, specifically their perceived level of autonomy, perceived organizational support for co-production, and perceived red tape associated with co-production activities. Survey research was conducted to question managers of Dutch organizations for elderly care about their interaction with client councils; an example of co-planning activities in the domain of health care. The results show that perceived autonomy in co-production, red tape associated with co-production, and organizational support affect professionals' engagement. Organizational support moreover reinforces the effect of work-autonomy on professionals' perception on the importance of co-production. These findings add to the study of co-production, and can help support public organizations to improve co-production.

5.1 INTRODUCTION

For decades, public administration is struggling with the question of how to bring the general public into administrative processes. Involvement of the public in administrative processes concerns citizens' rights and responsibilities but also how public professionals "view themselves and their responsibilities relative to citizens" (Thomas 1999: 83). Public professionals operate in constantly changing environments; directly affecting their role perceptions *vis-à-vis* citizens (cf. Osborne 2010).

In many administrative systems *co-production* is introduced, sometimes mandatory, to involve the public in public service delivery (Osborne and Strokosch 2013; Osborne, Radnor and Nasi 2012). The development towards co-production is, among others, induced by austerity measures in public finances and associated with a legitimacy crisis in public sector and private market performance. Co-production can be defined as a process in which citizens co-plan, co-design, co-prioritize, co-finance, co-deliver and/or co-assess public services alongside their "traditional" producers (that is public professionals) – with the aim to enhance the quality of public services delivered and produced (Bovaird and Löffler 2012a; Brandsen, Pestoff and Verschuere 2012; Brandsen and Honingh 2016).

The introduction of co-production in the activities of public professionals directly affect their work environment. Co-production requires public professionals to share their power, tasks, and responsibilities with citizen-users. Thus, co-producers and public professionals become collaborators in an effort to secure continuity and quality in the delivery of public services (Ewert and Evers 2012; Brandsen, Pestoff and Verschuere 2012).

Like other kinds of collaboration, co-production implies that public professionals' perception of co-production impacts on the effectiveness of co-production. Walter (1987), for example, shows how public managers create meaning, and clarify roles, in order to stimulate volunteering by citizens. Lemos and Morehouse (2005) argue that demonstrated openness to incorporate stakeholders is crucial for establishing trust and credibility in co-production.

Despite a long-standing co-production research tradition (cf. Verschuere, Brandsen and Pestoff 2012; Calabrò 2012), the attitudes of public professionals

towards co-production are hardly studied. Indeed, Fenwick (2012) concludes that empirical studies "at the front lines of everyday practice" are rare. This chapter fills this gap by studying public professionals' self-reported engagement in co-production. Engagement in co-production comprises three dimensions: perceived importance and perceived impact of co-production, as well as personal involvement in co-production. This chapter seeks to explain variation in public officials' engagement from characteristics of their work environment, more in particular their *perceived level of autonomy*, *perceived organizational support* for co-production, and *perceived red tape* associated with co-production activities.

Empirically, we study variation in public officials' engagement in co-production in the context of client councils in Dutch elderly care. Client councils in Dutch elderly organizations collaborate with the location manager on issues of organizational (strategic) management and quality of the health care provided to the elderly clients. So, our case is about co-planning as a specific form of co-production. Thus, the research question is: *How do location managers' perceptions of their autonomy, organizational support, and red tape explain their engagement in co-planning with client councils in Dutch organizations for elderly care?* The next section presents theoretical insights that link public professionals' autonomy, and perceptions of organizational support for and of red tape in co-production to their engagement in co-production. For each of these explanations we derive hypotheses. Subsequently, we describe the empirical context of Dutch client councils followed by a section on study design and research methods. Results of the analyses are presented and implications for research and practice discussed.

5.2 ENGAGEMENT IN CO-PRODUCTION

Co-productive public service delivery involves *citizens* (the co-producers) and *public service professionals* as "traditional" producers of public services (Brandsen, Pestoff and Verschuere 2012: 1). In line with co-production literature, the term "public service professional" is used here in a colloquial sense of the word – referring to a person who works for a public or quasi-public organization and is responsible for activities in the public service delivery process (Ostrom 1996; Brandsen and Honingh

2016). This broad definition should not be confused with strict definitions used in for example literature on professionalism (cf. Freidson 1994; 2001). While in literature on professionalism the features on jobs that can be labeled as 'professional' are rather strict, in co-production literature for example also the managers responsbile for collaboration with citizens are labelled professional.

Although many scholars perceive co-production as highly valuable (cf. Calabrò 2012), as such it does not occur spontaneously. To secure benefits from co-production, an essential precondition is that both citizens and public service professionals are truly engaged in co-production (Ostrom 1996; Loeffler and Hine-Hughes 2013). The mutual engagement of citizens and public service professionals can – in part – be stimulated by (selective) incentives (e.g., the establishment of contracts), and emerges when credible commitment and trust between co-production partners is built (Ostrom 1996: 1082).

Engagement in co-production has been, and almost exclusively, studied from the perspective of citizens. Thomsen (2015: 3) for example shows that the effort citizens put into co-production highly varies with individual characteristics (that is, their knowledge of how to co-produce and their self-efficacy). The imperative of collaboration in co-production requires that public service professionals are also engaged in co-production: willing to listen to the ideas and concerns of clients, and actively sharing information. An attitude towards collaboration encourages citizens to keep motivated (Van Eijk and Steen 2016: 13). "Managers who are personally involved with users' activities, who are being helpful and whose leadership style is less hierarchical, are more likely able to create a feeling of reciprocity among the group of participants" (Fledderus 2015a: 561).

Thus, it is important professionals are not just *involved* in co-production but feel really *engaged* with the collaboration with citizens. Involvement means that a professional takes part in the collaboration (for example as the result of a legal obligation). Engagement, moreover, implies that a professional is also willing to actively partake in the co-production effort; convinced that collaboration is important, persuaded by its usefulness and functionality, and committed to collaboration. Hence, even when professionals have little discretion in the process of co-production, their attitude remains highly important for its success.

5.3 CHARACTERISTICS OF PROFESSIONALS' WORK ENVIRONMENT

If then professionals' attitudes towards co-production are crucial, it is important to gain insight into what explains differences in their willingness to engage in co-production activities with clients. We study three characteristics of professionals' work environment as antecedents of their engagement, that is: (a) their work-autonomy in general and related to co-production, (b) their perceived organizational support, and (c) red tape in general and associated with co-production.

5.3.1 Work-Autonomy

The 'reward' of the status as a professional is, among others, the autonomy to carry out the professional work (Bucher and Stelling 1969: 4; Flynn 1999). Some scholars argue that professional (work-)autonomy is a crucial condition for professionals to perform well. Lipsky (2010) argues that street-level bureaucrats need discretion and autonomy in order to be flexible when carrying out daily-work activities. Co-production activities are not exclusively performed by street-level bureaucrats (such as police officers, social workers or health workers) but may be also performed by public managers. In performing their co-production activities, public managers are not dissimilar from classical street-level bureaucrats, defined by Lipsky (2010: 3) as "[p]ublic service workers who interact directly with citizens in the course of their jobs, and who have substantial discretion in the execution of their work."

Indeed, the literature on work engagement suggests that vitality, enthusiasm, and devotion are positively affected by perceived work-autonomy (Saks 2006). In turn, more engaged employees are found to better perform, be more creative, and show a willingness to carry out additional tasks (Bakker and Demerouti 2008). As co-production activities imply innovative ways of delivering services and require additional tasks, we expect that higher levels of perceived work-autonomy positively affect professionals' engagement in co-production activities. Thus, our first hypothesis states that:

> ***H1:*** Professionals' perceived work-autonomy positively affects their engagement in co-production.

However, there is a special twist when it comes to co-production. Co-production decreases professionals' freedom to make individual decisions and, hence, reduces the autonomous role and position of the professional in relation to clients. In the first place, mandatory co-production (enforced by law) limits professionals' options to autonomously decide upon the own work methods. In the second place, co-production affects professionals' autonomous position *vis-à-vis* clients. Brandsen and Honingh (2013) and Moynihan and Thomas (2013) suggest that citizen involvement affects professionals' (level of) expertise, legitimacy, and autonomy. Whereas professionals traditionally were exclusive producer of public services (planning, designing, and implementing public services), more actors become involved in co-production: service users, families, volunteers, neighbors, and other people become partners in the planning, designing, prioritizing, financing, and/or delivery stages (Bovaird and Löffler 2012a). Entering the professionals' domain with a legitimate voice, citizens and professionals become more interdependent (Bovaird 2007; Bovaird, Löffler and Hine-Hughes 2011).

Rather than substituting professionals, citizens are complementary to them (cf. Pestoff, 2012). The professional-client relation changes from a top-down, one-directional relationship (building users' trust in professionals and enforcing compliance), to a collaborative relationship based on user empowerment and interdependence (Ewert and Evers 2012). Co-production obliges the professional to share power, tasks and responsibilities with the "lay" citizen-user (Sharp 1980: 105). It is professionals' new task to stimulate and motivate potential co-producers to pick-up responsibilities within service delivery (Alford and O'Flynn 2012). For professionally involved public servants, this shift implies a loss of managerial control. On the other hand, and paradoxically, with blurring boundaries between professional and laymen responsibilities also comes a reduction in public accountability of professionals (Tonkens, Hoijtink and Gulikers 2013: 174). The more salient this dilemma of a reduction in autonomy in co-production, the less engaged professionals will become. Hence, we formulated the second hypothesis as:

> ***H2:*** Professionals' perceived autonomy in co-production positively affects their engagement in co-production.

5.3.2 Organizational support and red tape

Alford and O'Flynn (2012: 227) argue that for professionals to successfully adapt to their new roles in co-production organizational systems, structure, and culture need to change. Yet, what this change should contain remains unclear. Some studies provide insight in specific factors stimulating or hindering citizen participation or co-production more specifically. Huang and Feeney (2016) report that for public managers who are highly motivated by public values a consistency between their values and organizational values and culture positively affects their willingness to engage the public in activities. Hence, in organizations with a culture supportive of co-production, public professionals will be more convinced of the importance and usefulness of collaboration with clients – thus stimulating their engagement in co-production.

Also organizational procedures, structures and directives may be more or less supportive of co-production. Huang and Feeney (2016), for example, report a negative effect between performance measurement and public managers' attitudes towards civic engagement. Voorberg et al. (2015) report how local civil servants' commitment with social innovation projects is challenged by the city administrative structures. In addition, professionals need resources to perform co-production activities well, such as time and resources to organize and attend meetings. Co-producing clients often must be offered specific training programs. This results in hypothesis 3a:

> ***H3a:*** Professionals' perception of organizational support for co-production positively affects their engagement in co-production.

Organizational support for co-production provides professionals with a solid resource and cultural and organizational backup when interacting with clients in autonomy. Consequently, professionals are better able to counterbalance their loss of autonomy due to client interactions if they are supported by their organization. If organizational support is an important precondition for work-autonomy to affect professionals' engagement, an interaction effect must exist between organizational

support and work-autonomy on engagement. Hence we hypothesize that the positive effect of work-autonomy on engagement in co-production is reinforced by stronger organizational support. This results in hypothesis 3b:

> ***H3b:*** Professionals' perception of organizational support reinforces the positive effect of autonomy on engagement in co-production.

Formal structures and procedures may motivate professionals to engage in co-production activities. However, such structures and procedures may also be perceived as administrative costs and burden. Burdensome rules can also originate outside the organization, for example due to external control or governmental structures and procedures (Bozeman 2000). Administrative burden, also referred to as 'red tape' varies between individual employees (Rainey, Pandey and Bozeman 1995; Pandey and Scott 2002), negatively affecting organizational performance (cf. Bozeman 2000; Gore 1993; Kaufman 1977; Van den Bekerom, Torenvlied and Akkerman 2016).

Red tape can also originate as the result of interaction with stakeholders (Bozeman 2000; Torenvlied and Akkerman 2012), directly impacting upon co-production activities. Indeed, Floring and Dixon (2004: 160) argue that managers of health care services are skeptical about new public involvement arrangements due to the expected complexity and increase of red tape. Similarly, Huang and Feeney (2016) argue that the discouraging effect of performance measurement systems on public managers' motivation to invest time and resources in citizen participation may be further increased if participation is found to come with administrative burden, to be time-consuming or difficult to coordinate. This finding is in line with Moynihan (2003), and Yang and Callahan (2007) who argue that expected administrative costs drive public managers' negative attitude towards civic engagement. This results in our fourth hypothesis:

> ***H4:*** Professionals perceived levels of red tape associated with co-production negatively affects their engagement in

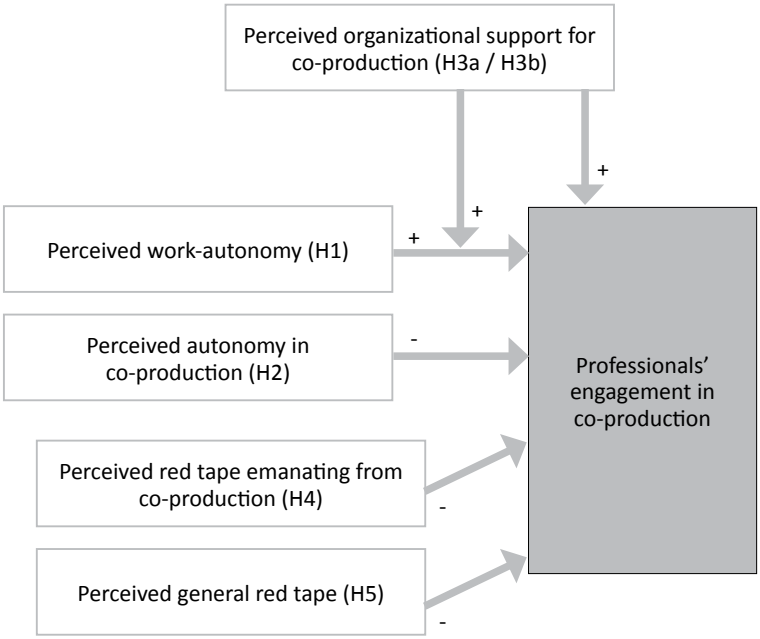
co-production.

Yet, since red tape can also originate from other sources and activities, and in the literature this red tape is found to also negatively impact on professionals' attitudes and performance, we also formulated a fifth and final hypothesis, namely:

> ***H5:*** Professionals perceived levels of general red tape negatively affects their engagement in co-production.

To wrap up, Figure 5.1 presents a stylized model with the hypotheses presented above.

Figure 5.1 Theoretical model explaining professionals' engagement in co-production



5.4 CLIENT COUNCILS IN ORGANIZATIONS FOR ELDERLY CARE

The empirical context of this study is formed by the collaboration between location managers in organizations for elderly care with the client councils in their organization. The Netherlands has a long tradition of patient' involvement. Within the last decades, patients have become actively involved as 'partners' of the professionals (Van den Bovenkamp 2010: 81). An important development in this respect is the institution of 'client councils' in 1996. By Dutch law, all health care organizations are obliged to install a client council (Overheid.nl 2012a). For the present study, this non-voluntary element is important from a methodological point of view, since it prevents biases that would occur if councils were exclusively formed on a voluntary basis.

Members of client councils are very diverse in their background, varying from direct patients (residents) to family members and even neighbors of the organization (Van Eijk and Steen 2014). The councils, thus, are a form of *co-planning by service users*: the council as a co-producer does not directly produce health care, but supports the organization's service delivery process indirectly (cf. Brandsen and Honingh 2016).

Client councils aim to enhance the quality of care provided. Dutch law has established a right of information for the councils. The councils provide input for management through a formal right (and initiative) of advice, at the strategic level as well as regarding the provision of care at the work floor. On some issues, the client council has a right of consent with management decisions. All these formal rights give client councils a uniform, horizontal position in co-production. Despite its legal position, the *de facto* impact of a client council in co-production with management is very much dependent on the perception of the location manager on co-production. This informs the motivation for the present study.

5.5 METHODS

To tap perceptions of location managers regarding co-planning with client councils a survey was sent to all location managers of organizations for elderly care. All types of health care organizations for the elderly were included in the sample, which mainly

vary in the intensity of care. Most nursing homes and centers for elderly care in the Netherlands are members of their sector confederation ActiZ, which is a sector-level partner for politicians and insurance companies (ActiZ 2014). Approximately 70 percent[9] of all organizations for elderly care are member of ActiZ. All contact details of the relevant organizations for elderly care were made available to the researchers, which was subsequently validated and complemented with information from an authoritative list of organizations for elderly care published by the Dutch Health Care Inspectorate (*Inspectie voor de Gezondheidszorg*). For the population we identified all 'locations' of larger-scale nursing homes and centers for elderly care as individual units of analysis. This resulted in 1,970 potential respondents (i.e., location managers) nested in 372 coordinating nursing homes and centers for elderly care.

In 2014, the potential respondents were invited by email to participate in an online survey. Two reminders were sent. After ten weeks, the response rate was 22 per cent (*N* = 430). This response rate is still substantial given the work pressure on location managers, the sweeping reforms they are confronted with, and the prevalence of survey research in the sector. Also note that locations had been merged or that location managers collaborated with multiple client councils.[10] A non-response analysis (see Table 5.1) shows no significant differences between sample and population for some critical characteristics.

The chosen design has the potential for common source bias: a bias that stems from using perceptual measures from the same survey as independent and dependent variables. Unfortunately, there are few ways to unobtrusively, or independently, study professionals' engagement in co-production (in contrast to, for example, performance). It is very difficult to control for common source bias in such a design (Podsakoff, MacKenzie, Lee and Podsakoff 2003). Within a chosen design, only instrumental variables can solve the problem, but these are hard to obtain (Podsakoff, MacKenzie and Podsakoff 2012). Therefore, we cannot rule out

9 Based on the total number of organizations for elderly care mentioned on the websites of the Inspectie voor de Gezondheidszorg (IGZ, Health Care Inspectorate) and ZorgkaartNederland (both consulted January 2014).

10 A response rate of 22 percent is comparable to some other studies among staff of nursing homes for elderly: Goergen (2001) reports 20 percent. Evers, Tomic and Brouwers (2001) report a response rate up to 47 percent but used a quite different research strategy: they held face-to-face interviews with respondents from a very limited number of organizations.

that some of the responses are driven by the chosen survey method.

Table 5.1 Comparison of some major characteristics for the population and sample: one-sample t-tests to check for non-response bias

Characteristic		**Population (*N*=1970)**		**Sample (*N*=430)**	
		Frequency (%)	Mean	Frequency (%)	Mean
Inclusion in coordinating organization (number of locations)					
	1 location	6.7%	.07	6.7%	.07
	2-5 locations	18.7%	.19	18.4%	.18
	6-10 locations	28.0%	.28	30.2%	.30
	≥ 11 locations	46.6%	.47	44.7%	.45
	Total	100%		100%	
Place of business					
	Randstad [a]	38.5%	.39	37.7%	.38
	Not located in Randstad	61.5%	.61	62.3%	.62
	Total	100.0%		100.0%	

*=Significant at .10 level; **=Significant at .01 level
[a] The Randstad is the main urban area in the Netherlands

5.5.1 Measurement of variables

To measure the relevant variables, translated and contextualized versions of validated scales were used where possible. To make sure the compound measurement scale worked out in practice, we held pilot-interviews.[11] Below the variables are discussed step-by-step.

The dependent variable is the location manager's *self-reported engagement with co-production*. Above we defined engagement as a construct that comprises three dimensions. The first dimension is perceived importance of co-production

11 Since we intend to study other cases as well, the pilot-interviews were held in the cases health care, neighborhood watch, councils established as part of the Social Support Act (Wmo), and advisory councils at primary schools.

in terms of the added value for the organization. We developed two items to tap importance (see Table 5.2). We used non-parametric item response scaling for polytomous items (Mokken scale analysis) to assess the scale strength. This measurement model is especially suitable for cumulative scales that aim to tap latent traits of respondents. For a full discussion see Torenvlied, Akkerman, Meier and O'Toole (2013). Both items form a strong scale, as indicated by Loevinger's $H = 0.49$. The second dimension, perceived impact, is tapped by three items (see Table 5.2). Perceived impact pertains to the perceived usefulness and functionality of collaboration with the client council. The three items form a strong scale *(*$H = 0.52$). The third dimension is personal involvement, referring to the self-reported commitment to the client council in relation to the location manager's intrinsic motivation for collaboration. Three items (see Table 5.2) form a scale of moderate strength ($H = 0.40$). To assess divergent validity of the three scales we analyzed correlations between the scales. These correlations are moderate: 0.32, 0.38, and 0.40. This indicates that, in addition to a general tendency for engagement, location managers score differently on aspects of importance, perceived impact, and personal involvement.

Table 5.2 Composition of the three scales of engagement with co-production (*N* = 342)

Subscale	Item	Consistency
Importance		*H* = 0.49
Organizational	"Involvement of users of our services is important within my organization."	
Democratic	"Cooperation with clients is important from a democratic viewpoint."	
Perceived impact		*H* = 0.52
Councils are influential	"Most times, the organization would have made the same decision." (reversed)	
Councils have effect	"Cooperation with client councils increases the quality of service delivery."	
Councils are efficient	"Cooperation with client councils demands more effort than worthwhile." (reversed)	
Councils are genuine	"I view the cooperation with client councils mainly as a legal requirement." (reversed)	
Personal involvement		*H* = 0.40
Stimulate participation	"I involve members of the client council, even when it is not expected of me.	
Satisfactory collaboration	"Professionally, I am satisfied with the collaboration with council members."	

Autonomy. The first independent variable, work-autonomy, was measured using three standard items, taken from Breaugh (1989). We asked respondents for their agreement with the following three statements, on a 7-point scale (varying from "strongly disagree" to "strongly agree"): "I am allowed to decide how to go about getting my job done"; "I have some control over the sequencing of my work activities – when I do what"; "I have some control over what I am supposed to accomplish – what my supervisor sees as my job objectives." The autonomy scale has a strong reliability (alpha = 0.83).

Autonomy when working with client council. We specifically measured respondents' perceived autonomy in working with the client council using the

following statement: "Due to collaboration with the client council, I experience … possibilities to determine the content and activities of my work." Responses were measured on a 7-point scale, varying from "much less" to "much more". Correlation between the measure for job autonomy and the item co-production autonomy is 0.08, which indicates that general work-autonomy and autonomy in co-production are quite distinct.

Organizational support. To tap the second independent variable, organizational support, we departed from a measure developed by Huang and Feeney (2016) and asked the location manager "To what extent does your organization support your collaboration with the client council?" Answer categories vary on a 7-point Likert scale for three forms of support, distinguishing between: (a) the formulation / adaptation of organizational structures, procedures, and directives, (b) provision of time and resources, (c) stimulating an organizational culture of openness towards co-production. An item-response analysis shows that the three items form a strong scale (Loevinger's H = 0.70).

General red tape. The third independent variable was measured based on Rainey, Pandey and Bozeman's (1995) general red tape measure: "If red tape is defined as 'burdensome administrative rules and procedures that have negative effects on the organization's effectiveness', how would you assess the level of red tape in your organization?" Respondents graded between 0 and 10, where '0' indicates 'no red tape at all' and '10' indicates 'a very large amount of red tape'.

Co-production red tape. We also asked about red tape specifically associated with co-production. We asked location managers "To what extent does collaboration with the client council produce administrative burden for your work?" and used the same 10-point scale. Correlation between "general red tape" and "co-production red tape" is relatively low, 0.26 – indicating that both constructs indeed tap different aspects of red tape in the work environment of the location managers. Tables 5.3a and 5.3b provide an overview of the descriptive statistics for the dependent and independent variables in the study and their correlations respectively.

Table 5.3a Summary statistics for the variables in the analysis (*N* = 280)

	mean	s.d.	min.	max.
Engagement				
1a. Importance	12.50	1.19	8	14
1b. Perceived impact	17.76	3.91	2	25
1c. Personal involvement	11.61	1.56	4	14
Independent variables				
2. Autonomy	18.15	1.77	9	21
3. Autonomy in co-production	4.47	0.98	1	7
4. Organizational support	17.54	2.10	7	21
5. Red tape in co-production	4.44	2.07	0	9
6. Red tape general	7.25	1.60	1	10

Table 5.3b Correlation coefficients

Variable	1a	1b	1c	2	3	4	5	6
1a. Importance	1.00							
1b. Perceived impact	0.38	1.00						
1c. Personal involvement	0.34	0.37	1.00					
2. Autonomy	0.06	0.08	0.13	1.00				
3. Autonomy co-production	0.30	0.43	0.35	0.11	1.00			
4. Organizational support	0.34	0.22	0.27	0.08	0.15	1.00		
5. Red tape co-production	-0.24	-0.39	-0.30	-0.16	-0.21	-0.17	1.00	
6. Red tape general	-0.01	-0.10	-0.03	-0.15	0.00	-0.07	0.28	1.00

Control variables. A number of control variables are included in the study to control for potentially confounding variables. Gender was measured in a dummy variable "female." Education was measured as the highest level of education the respondent had obtained, with three categories: (1) lower, secondary, and vocational education; (2) higher professional education; (5) university. Experience of the location manager is measured as the number of years the respondent is

working in the current function. Five types of elderly organizations are distinguished in the data: nursing homes (25 percent), elderly homes (15 percent), health care center for elderly (54 percent), integrated facility (3 percent), other (3 percent). We also control for interaction frequency with the client council, measured by asking the location manager "how frequently do you meet with members of the client council?" (cf. O'Toole and Meier 2011; Torenvlied, Akkerman, Meier and O'Toole 2013). Responses were recoded in three categories: (a) daily and weekly, (b) monthly, (c) yearly, never, or non-applicable.

5.6 RESULTS

To test the hypotheses we performed a series of ordinary least squares regression models with robust standards errors. The cases (*N* = location managers in the analysis) are clustered in 138 health care organizations to control for statistical dependency. Three analyses were performed, each for a specific dimension of location managers' engagement in co-production: perceived importance, perceived impact, and self-reported involvement.

Table 3 presents the results for the first dimension of location managers' engagement in co-production: a regression of perceived importance of client councils on the independent variables. Two models are presented. Model I presents results for the main independent variables, testing the hypotheses. Model II adds control variables in order to test robustness of effects when introducing potentially confounding variables into the model. Table 5.4 shows that only autonomy associated with the co-production process negatively affects perceived importance of the client councils; work-autonomy has no significant effect. Hence we reject hypothesis 1 while hypothesis 2 finds support in the empirical data. Hypotheses 3a and 3b are both supported by the data: perceived organizational support positively and significantly affects perceived importance and significantly increases the (positive) effect of autonomy on perceived importance of the client councils. Finally, red tape associated by location managers with co-production negatively affects perceived importance of the client councils (supporting hypothesis 4) while perceived general red tape seems unrelated with perceived importance of the

client councils (rejecting hypothesis 5). The effects are robust when controlling for individual characteristics of the location manager and characteristics of the client council and parent organization.

Table 5.4 Perceived Importance of Client Councils: results of OLS Regression (*N* = 276)

	Model I			Model II		
	B	(s.e.)	t	B	(s.e.)	t
Explanatory variables						
Autonomy	0.02	(0.04)	0.39	0.03	(0.04)	0.60
Autonomy in co-production	0.28	(0.07)	4.19***	0.27	(0.07)	3.92***
Organizational support	0.14	(0.03)	5.10***	0.15	(0.03)	5.15***
Support x Autonomy	0.05	(0.01)	3.57**	0.04	(0.01)	3.01**
Red tape in co-production	-0.10	(0.03)	-3.10**	-0.09	(0.03)	-2.72**
Red tape general	0.05	(0.04)	1.22	0.05	(0.04)	1.23
Control variables						
Contact [A]						
Monthly				-0.29	(0.17)	-1.76
Sparsely				-0.20	(0.20)	-1.01
Experience				0.01	(0.01)	0.32
Female				0.07	(0.13)	0.56
Education						
High vocational [B]				-0.05	(0.23)	-0.23
University				-0.07	(0.27)	-0.27
Organization type [C]						
Health care center				-0.27	(0.15)	-1.87
Hybrid organization				-0.84	(0.37)	-2.28*
Other organization				0.14	(0.20)	0.70
Constant	8.56	(0.88)	9.68***	8.54	(1.07)	7.98***
R^2	0.24			0.28		

[A] Daily and weekly contact is reference category; [B] Vocational education is reference category;
[C] Nursing home / elderly home are reference categories.
* $p < .05$; ** $p < .01$; *** $p < .001$.
Robust standard errors clustered in 138 organizations.

Table 5.5 presents the results for the second dimension of location managers' engagement in co-production: a regression of perceived impact of the client councils on the independent variables. Table 5.5 paints a slightly different picture than the previous analysis: perceived autonomy in co-production and co-production associated red tape significantly affect the perceived impact of client councils. However, the direct effect of organization support and its interaction effect with autonomy are non-significant. Hence, only hypotheses 2 and 4 find support in the empirical data on perceived impact of the client councils. All other hypotheses are rejected for the perceived impact of co-production. These results are robust when controlling for individual characteristics of the location manager and characteristics of the client council and parent organization.

Table 5.5 Perceived Impact of Client Councils: results of OLS Regression (*N* = 276)

	Model I			Model II		
	B	(s.e.)	t	B	(s.e.)	t
Explanatory variables						
Autonomy	-0.01	(0.12)	-0.06	-0.02	(0.12)	-0.21
Autonomy in co-production	1.43	(0.20)	7.04***	1.36	(0.21)	6.45***
Organizational support	0.18	(0.11)	1.62	0.16	(0.11)	1.41
Support x Autonomy	0.07	(0.05)	1.49	0.06	(0.05)	1.13
Red tape in co-production	-0.55	(0.11)	-5.18***	-0.55	(0.10)	-5.29***
Red tape general	-0.05	(0.12)	-0.43	-0.08	(0.12)	-0.65
Control variables						
Contact [A]						
Monthly				-0.94	(0.51)	-1.85
Sparsely				-1.34	(0.71)	-1.90
Experience				-0.04	(0.03)	-1.44
Female				-0.48	(0.43)	-1.11
Education						
High vocational [B]				0.55	(0.88)	0.62
University				0.90	(1.07)	0.84
Organization type [C]						
Health care center				-0.74	(0.37)	-1.98
Hybrid organization				0.26	(0.86)	0.30
Other organization				1.51	(1.09)	1.38
Constant	11.19	(3.15)	3.55***	13.94	(4.33)	4.33***
R^2	0.30			0.34		

[A] Daily and weekly contact is reference category; [B] Vocational education is reference category; [C] Nursing home / elderly home are reference categories.
* $p < .05$; *** $p < .001$.
Robust standard errors clustered in 138 organizations.

Table 5.6 Self-reported Personal Involvement in Client Councils: results of OLS Regression (*N* = 276)

	Model I			Model II		
	B	(s.e.)	t	B	(s.e.)	t
Explanatory variables						
Autonomy	0.04	(0.04)	1.12	0.05	(0.04)	0.18
Autonomy in co-production	0.43	(0.07)	6.24***	0.43	(0.08)	5.71***
Organizational support	0.15	(0.04)	3.60***	0.12	(0.04)	2.96**
Support x Autonomy	-0.01	(0.02)	-0.37	-0.02	(0.02)	-0.95
Red tape in co-production	-0.16	(0.04)	-3.68***	-0.15	(0.04)	-3.39**
Red tape general	0.05	(0.05)	0.97	0.02	(0.05)	0.43
Control variables						
Contact [A]						
Monthly				-0.37	(0.19)	-1.90
Sparsely				-1.21	(0.30)	-4.06***
Experience				0.03	(0.01)	2.53*
Female				0.19	(0.18)	1.09
Education						
High vocational [B]				-0.01	(0.30)	-0.03
University				0.40	(0.32)	1.27
Organization type [C]						
Health care center				0.05	(0.17)	0.30
Hybrid organization				-0.15	(0.52)	-0.29
Other organization				-0.01	(0.44)	-0.02
Constant	6.68	(1.16)	5.75***	6.85	(1.27)	5.40***
R^2	0.21			0.29		

[A] Daily and weekly contact is reference category; [B] Vocational education is reference category; [C] Nursing home / elderly home are reference categories.
* $p < .05$; ** $p < .01$; *** $p < .001$.
Robust standard errors clustered in 138 organizations.

Table 5.6 presents the results for the third dimension of location managers' engagement in co-production: a regression of personal involvement in co-production on the independent variables. Table 5.6 replicates the results of the first analysis, except the interaction effect between organizational support and autonomy. Hence, hypotheses 2, 3a, and 4 find support in the empirical data on personal involvement in co-production, while hypotheses 1 and 3b are rejected.

In summary, the hypotheses about the effects of general work-autonomy (hypothesis 1) and general red tape (hypothesis 5) on location managers' self-reported engagement in co-production are rejected for all three dimensions of engagement. By contrast, autonomy in specific co-production activities positively (hypothesis 2) and red tape associated with co-production negatively (hypothesis 4) affect all three dimensions of self-reported engagement significantly – as expected. Organizational support for co-production (hypothesis 3a) positively affects location managers' perceived importance of co-production with client councils and their personal involvement with these councils. Organizational support significantly reinforces the positive effect of work-autonomy on perceived importance of the client councils (hypothesis 3b).

5.7 CONCLUSION AND DISCUSSION

The present study builds upon the recent co-production literature on the functioning of collaboration between (representatives of) public organizations and co-producers in public service provision. The core assumption in the present study is that co-production entails a collaborative relationship between public professionals and citizen-users. In the extant literature insights in public professionals' attitudes remain limited. We studied the engagement of location managers of Dutch organizations for elderly care in their interaction with client councils.

We explained variation in the self-reported engagement of the Dutch location managers from variation in their perceived work-autonomy, perceived autonomy related to co-production, perceived organizational support, level of red tape associated with co-production, and reported level of general red tape. We included 278 location managers in the study, nested in 138 health organizations for

the elderly. The results of our analyses are a first step towards a better understanding of professionals' stance towards co-production.

A first important finding relates to the concept of engagement in co-production. Our study indicates that professionals' engagement in co-production is not something superficial, induced by a mandatory institution such as the client council. Engagement is no unidimensional concept, but rather builds upon different aspects, including professionals' perceptions of the importance and impact of co-production, and their personal involvement in co-production. Whereas the current literature emphasizes co-producers' 'credible commitment' (Ostrom 1996; Loeffler and Hine-Hughes 2013) our study shows that also the engagement of professionals cannot be taken for granted.

Our study, moreover, shows that engagement varies among professionals – even in a context where professionals' involvement is mandatory. Thus, we prevented a selection bias of including professionals' who are already in favor of co-production. Public organizations that want to implement co-production should take into account that for successful co-production engagement can be a prerequisite, as other studies show (Bakker and Demerouti 2008).

Public organizations are able to affect some of the work environment characteristics that are found to affect professionals' engagement. The results of our study indicate that it is not so much the general work environment (work-autonomy and general red tape) but rather their specifications emerging from co-production itself that affect dimensions of engagement (that is: autonomy in co-production and red-tape associated with co-production). Work-autonomy only positively significantly affects engagement (in particular the importance of co-production) when organizational support is perceived to be high.

Differences between the three dimensions are found regarding perceived organizational support. Organizations, through their structures, procedure and culture, can support professionals in recognizing the dimension of importance and personal involvement in co-production. Organizational support did not significantly affect the second dimension of engagement: the perceived impact of co-production. So, organizations can convince their employees of the importance and relevance of co-production, as well as encourage them to feel personally committed with

the collaboration. Yet, organizations can less influence employees' perceptions on the usefulness and functionality of co-production. We did not explore the role of training to stimulate the emergence of norms supporting co-production. That would be an avenue for further study.

Two important limitations to this study lie in the nature of the data gathered. First, the cross-sectional data makes it possible to observe associations among variables, but not to test causality in the direction of relations. We cannot rule out that causal directions are reversed, for example that a lack of co-production engagement would induce perceptions of red-tape in professionals. However, theoretical claims make it more plausible that the direction of causality is what we tested, rather than reverse. Future research design should include specifically tailored instrumental variables to rule out endogeneity problems. A second disadvantage is linked to the use of surveys as obtrusive instruments for data collection. The present study relies on self-reported data by respondents. The use of self-reported data in this study is valuable, because it focuses on attitudinal and descriptive data on importance, impact, and personal involvement in co-production. Other studies also emphasize the added value of using self-reported cross-sectional data in similar designs, for example testing the relation between Public Service Motivation and perceived social impact of employees' work (Stritch and Christensen 2014), or officer perceptions of community policing (Glaser and Denhardt 2010). The design, however, bears the risk of common method bias. Even though correlations between the dimensions are not high, and correlations between independent variables are generally low, we must be careful in the interpretation and generalization of results of the present study. Future studies may develop instrumental variables, or even an "objective" and independent measurement of engagement. This is an important challenge for future co-production research.

Although the research findings should be put in perspective, given the design limitations, results do contribute to the current co-production literature. Scholars have only recently started to unravel the impact of co-production on professionals' work from a theoretical point of view (cf. Brandsen and Honingh 2013; Alford and O'Flynn 2012). The present study provides new empirical evidence on the correlates of professionals' attitudes towards co-production with characteristics of their work

environment. The dimensions of engagement in co-production can be further developed and refined to further understanding of professionals' attitudes towards co-production. The first results are promising, but should be cautiously interpreted, and we very much encourage further research on engagement in co-production in other contexts.