

APPENDIX A: EXAMPLE FOR CODING AND CONCEPT DEVELOPMENT—RULES

(Adapted from Lim et al. 2012; Strong and Volkoff 2010)

Text Passages From Documents	Code Development: <u>Open (Underlined)</u> and <i>Axial (Italic)</i> Codes	Category Emerging From Selective Coding																																																												
<p>“There are three [partner] levels [...] Each level has specific requirements and benefits as set forth in the Program Guide” <i>(partner contract Beta).</i></p> <p>“Partners will receive certain benefits and consulting services [...] as outlined in the Program Guide. The benefits vary by [...] level and are described in the Program Guide” <i>(partner contract Beta).</i></p> <p>“When participating in the [partner program], the partner is eligible to receive benefits. The scope of benefits depends on the partner level. Details about these benefits and their requirements are set forth in the Program Guide” <i>(partner contract Alpha).</i></p> <p>Special partner program benefits per partner level:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Partner level</th> <th>L1</th> <th>L2</th> <th>L3</th> </tr> </thead> <tbody> <tr> <td colspan="4">Marketing benefits</td> </tr> <tr> <td>Usage of Alpha logo</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Campaign strategies</td> <td>-</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Publishing case studies</td> <td>-</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Business partner innovation center</td> <td>-</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Information events for customers</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Co-financing</td> <td>-</td> <td>-</td> <td>✓</td> </tr> <tr> <td colspan="4">Technological benefits</td> </tr> <tr> <td>[Alpha development suite]</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>[Alpha runtime components]</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>[Alpha development centers]</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Integration support</td> <td>-</td> <td>-</td> <td>✓</td> </tr> <tr> <td colspan="4">Collaboration</td> </tr> <tr> <td>Networking events</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table> <p><i>(excerpt from online partner guide Alpha).</i></p> <p>“[Beta] partnership also offers several opportunities for partners to engage in initiatives spanning market awareness, code development, and technical certification, as well as participation in diverse community-related activities [...such as]:</p> <ul style="list-style-type: none"> - Marketing awareness, branding, and lead generation - Implementation and certification services, shared process, and industry expertise [...] <p><i>(partner guide Beta).</i></p> <p>“[Beta’s partner program] provides enablement services to partners [...]: Technical enablement, marketing enablement, sales enablement” <i>(partner guide Beta).</i></p> <p>“With the [partner program], [Alpha] offers benefits and services in terms of marketing, development and technical support” <i>(partner contract Alpha).</i></p>	Partner level	L1	L2	L3	Marketing benefits				Usage of Alpha logo	✓	✓	✓	Campaign strategies	-	✓	✓	Publishing case studies	-	✓	✓	Business partner innovation center	-	✓	✓	Information events for customers	✓	✓	✓	Co-financing	-	-	✓	Technological benefits				[Alpha development suite]	✓	✓	✓	[Alpha runtime components]	✓	✓	✓	[Alpha development centers]	✓	✓	✓	Integration support	-	-	✓	Collaboration				Networking events	✓	✓	✓	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><u>Rules</u></p> <p><i>Similar conditions:</i> In both ecosystems, there are different resources for different partner levels</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p><u>Rules</u></p> <p><i>Similar resources:</i> In both ecosystems, marketing resources; technical resources</p> <p><i>Similar conditions:</i> In both ecosystems, standard resources for all partners; more valuable resources only for higher partner levels</p> </div>	<p>In comparing these passages with each other (and with additional passages), two core properties of rules emerged that were similar for both partner programs: (1) rules specify access to resources of two types (i.e., technical resources and marketing resources); (2) rules specify access to different resources, depending on the partner level. This led us to an abstract rules category that highlights these similarities, i.e., RULE 1 and RULE 2. Both rules specify access to different resources (i.e., marketing vs. technical), depending on partner levels.</p>
Partner level	L1	L2	L3																																																											
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[Alpha development centers]	✓	✓	✓																																																											
Integration support	-	-	✓																																																											
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Networking events	✓	✓	✓																																																											

APPENDIX B: EXAMPLE CODING AND CONCEPT DEVELOPMENT—PRACTICES

(Adapted from Lim et al. 2012; Strong and Volkoff 2010)

Interview Text	Code Development: <u>Open (Underlined)</u> and <i>Axial (Italic)</i> Codes	Code Refinement: <u>Open (Underlined)</u> and <i>Axial (Italic)</i> Codes	Themes Emerging From Selective Coding	Applied Data Analysis Techniques and Tools
Example 1:				
<p>Q: How did you govern the relationship with [A4] at the beginning of the partnership?</p> <p>A: Well, there are several approaches. Once the partner is recruited for the partner program, there are clear rules that specify the partner's benefits and obligations [to receive these benefits]. In the end, this is a contract. For instance, to get money from the marketing program, the partner has to fulfill certain conditions. You could call these formalisms, which are important because they provide orientation for the partner and they make us [Alpha] predictable. The partner knows exactly what he can expect and what is expected of him.</p> <p>Yet, if you meet a partner in daily business, say in a customer situation, this requires something beyond that. In this case, it's about building trust. [To do this] You have to demonstrate to the partner that [cooperation with Alpha] is manageable. For this, I tell [A4]: "I am a human [being]. I will handle the gigantic [Alpha] for you. I will be your navigation aid. I will show you how it works." This is trust-building [...] The essence, particularly in the beginning, but also throughout the partnership, is to always keep promises – to demonstrate extreme timeliness, and extreme reliability. That is what matters.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><u>Practicing rules</u></p> <p><i>Subcategory:</i> Executing rules</p> <p><i>Consequences:</i> Rules are important as a frame of reference</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p><u>Practicing values</u></p> <p><i>Subcategories:</i> Demonstrating reliability; demonstrating readiness for efficient cooperation</p> <p><i>Consequence:</i> Trust</p> <p><i>Situational factors:</i> Characteristics of customer situation</p> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><u>Executing rules</u></p> <p><i>Subcategory:</i> Executing rules while emphasizing values</p> <p><i>Consequences:</i> Relational Capital, Economizing on governance costs</p> <p><i>Necessary Conditions:</i> Situational factors</p> </div>	<p>Comparing this passage to other passages on rule practicing, themes about executing rules in relation to values emerged, e.g., the differential consequences of simultaneously emphasizing values for trust. Such trust affected the complementors' willingness to provide valuable resources. Along with other, related passages (see Example 2 below), this led to an understanding of the role of rules and values for addressing the dyadic governance tension. Specifically, both ecosystem-wide rules <i>and</i> values serve as a frame of reference for governance practices and the way they are interpreted on the level of the dyad. For instance, practicing rules in ways that are sensitive to values is perceived as a sign of trustworthiness, nurturing the development of relational capital. This triggers complementors to provide access to resources without insisting on safeguards, which in turn further nurtures relational capital, and enables economizing on governance costs. Moreover, this practice occurred under specific conditions—these were used to elaborate the situational and contingent character of governance.</p>	<p>Initial category development: Open coding of text passages with NVivo</p> <p>Category refinement: Axial coding of text passages with NVivo, theoretical sampling, memos, tables</p> <p>Theme development: Selective coding using memos, case write-ups, data displays, logic models.</p>

Example 2:				
<p>To make a long story short: Why is it important to build trust? Why is it important to demonstrate reliability? Because then you can say: "Let's seal this with a handshake. Let's just give it a try."</p> <p>Q: And does this change the way you govern [A4]?</p> <p>Yes, it's about what I just said. Over time, it becomes more common and easier to stretch a point, because you know that the other party is reliable and keeps promises, and sticks to "gentlemen's agreements". You don't have to plague the other party along the lines of, "I want to see what you did with the money." In addition, you communicate more openly, and you can talk about inconvenient truths. In my opinion, all of this elevates joint business. For instance, at the beginning of the partnership, I tended to be more withdrawn. I simply couldn't say or do some things. Yet, over the course of the partnership, a trusting relationship has developed [...] At the beginning, it's obviously necessary to follow the formalities more closely, but later, it becomes possible to say to the partner: "[Alpha] has formulated this set of rules [...] Well [...] I will explain these rules to you, but we will leave this [set of rules] aside, and we will figure out a way."</p> <p>Also, over time, partners like [A4] begin to learn my needs and my pains. Furthermore, they know exactly what they have to do to ensure that I appear in a favorable light internally [i.e., at Alpha]. And of course, I return the favor. [For this purpose] I can do a thousand different things. Parking marketing money is a good example, i.e. if at the end of the [fiscal] quarter, money from the marketing budget is left over, then I try to spend it. In this case, I pretend to have spent the money in this quarter, even though a joint marketing campaign has been neither planned, nor conducted [which are the formal eligibility criteria to receive marketing money]. However, if I want that money for [A4], then we write a receipt about an alleged marketing campaign—even though everyone involved knows that this money will be needed and spent later [when a campaign is actually conducted]. I mean, who cares? Maybe accountants do [laughs...], but our joint business does not end on June 30 and reboot on July 1. For me, the important thing is that the money has been spent in favor of the partner, and accordingly for our business success [...] But I would never do that with a new partner.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><u>Self-reinforcing dynamics</u></p> <p><i>Subcategory:</i> Virtuous cycle: Mutual trust that has developed through prior practices. This enables partners to engage in flexible rule stretching</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p><u>Rule practices</u></p> <p><i>Subcategory:</i> Stretching rules</p> <p><i>Situational factors:</i> Substantial value co-creation potential, insufficiency of ecosystem resources</p> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><u>Going beyond the rules</u></p> <p><i>Subcategory:</i> Stretching rules while favoring values</p> <p><i>Necessary Conditions:</i> Substantial value co-creation potential, insufficiency of ecosystem resources</p> <p><i>Self-reinforcing processes:</i> Prior value-sensitive practices facilitate the development of relational capital, thereby creating the conditions for flexible, uncomplicated rule-stretching, which subsequently economizes on governance costs</p> </div>	<p>By comparing this passage to other passages in which rules were closely followed (see Example 1), and to other passages in which boundary spanners went beyond the rules (but in different ways), themes emerged about the necessary conditions for partnership managers to go beyond the rules (in different ways). Moreover, comparing the dynamics described in this passage with similar dynamics in different cases, as well as dynamics that occurred earlier (see Example 1) and later in the same case, allowed us to unveil the relationship between necessary conditions and self-reinforcing processes. Specifically, we identified two situational factors as necessary conditions (i.e., substantial value co-creation potential and insufficiency of ecosystem resources) for partnership managers to go beyond the rules in their governance practices. Going beyond the rules resulted in substantially higher co-created value compared to when partnership managers did not go beyond the rules. Moreover, partnership managers went beyond the rules in varying ways—depending on the level of relational capital. The self-reinforcing cycles feed into these necessary conditions, thereby explaining shifts as to how rules are practiced, and stable paths as to how values are practiced.</p>	<p>Initial category development: Open coding of text passages with NVivo</p> <p>Category refinement: Axial coding of text passages with NVivo, theoretical sampling, memos, tables</p> <p>Theme development: Selective coding using memos, case write-ups, data displays, logic models.</p>

APPENDIX C: DETAILED OUTCOMES PER CASE

Case	Co-Created Value [Appropriated By]	Governance Costs [Borne By]
A1	<p>Moderate:</p> <ul style="list-style-type: none"> ▪ <i>Slight extension of platform functionality:</i> Website analytics for insurance companies based on Alpha's business intelligence platform [Alpha] ▪ <i>Revenue from small implementation projects:</i> Configuration and rollout of web analytics software at insurance companies, website optimization projects at insurance companies [A1] ▪ <i>Limited flow of license fees:</i> Four-figure annual license fees (€) per customer [A1] 	<p>Limited time and effort:</p> <ul style="list-style-type: none"> ▪ No intense interpersonal interaction between liaison and partnership manager [both] ▪ Standard-based governance focusing on arranging remote access to standard ecosystem resources [both] <p>And no additional safeguarding:</p> <ul style="list-style-type: none"> ▪ No patents claimed, no dyadic contracts [both] ▪ Partnership management not bypassed [both]
A2	<p>Moderate (initially):</p> <ul style="list-style-type: none"> ▪ <i>Slight extension of platform functionality:</i> Extension of platform through basic manufacturing execution system (MES) [Alpha] ▪ <i>Revenue from small implementation projects:</i> Implementation projects at small-and-medium sized manufacturing companies to automate manufacturing execution through A2's software [both] ▪ <i>Limited flow of license fees:</i> Four-figure annual license fees (€) per customer [A2] <p>Substantial (later):</p> <ul style="list-style-type: none"> ▪ <i>Major extension of platform functionality:</i> Extension of platform through deeply-integrated, highly platform-specific manufacturing execution system (MES). A2's MES becomes operationally important for manufacturing companies [Alpha] ▪ <i>Revenue from major, joint implementation projects:</i> Large-scale implementation projects at major manufacturing companies to automate manufacturing execution through A2's software; Long-term and large-scale manufacturing optimization initiatives at client companies [both] ▪ <i>Substantial flow of license fees:</i> Alpha winning over new customers for the platform because they want to license A2's MES; Five-figure annual license fees (€) per customer of the MES/platform [both] 	<p>Limited time and effort (initially):</p> <ul style="list-style-type: none"> ▪ No intense interpersonal interaction between liaison and partnership manager [both] ▪ Standard-based governance focusing on arranging remote access to standard ecosystem resources [both] <p>And no additional safeguarding (initially):</p> <ul style="list-style-type: none"> ▪ No patents claimed, no dyadic contracts [both] ▪ Partnership management not bypassed [both] <p>Substantial time and effort (later):</p> <ul style="list-style-type: none"> ▪ Intense interpersonal interaction between A2's liaison and Alpha's partnership manager [both] <p>But no additional safeguarding (later):</p> <ul style="list-style-type: none"> ▪ No costs for concluding dyadic contract or claiming patents [both] ▪ Flexibility through stretching and leap of faith-like resource contributions by A2 [both]
A3	<p>Moderate:</p> <ul style="list-style-type: none"> ▪ <i>Slight extension of platform functionality:</i> Ontology-based expert and knowledge retrieval system 	<p>Limited time and effort:</p> <ul style="list-style-type: none"> ▪ No intense interpersonal interaction between liaison and partnership manager [both]

	<p>based on Alpha's analytics platform [Alpha]</p> <ul style="list-style-type: none"> ▪ <i>Revenue from small implementation projects:</i> Configuration and rollout of expert and knowledge retrieval system at SMEs; Knowledge management projects at SMEs [A3] ▪ <i>Limited flow of license fees [complementor]:</i> Four-figure annual license fees (€) per customer [A3] 	<ul style="list-style-type: none"> ▪ Standard-based governance focusing on arranging remote access to standard ecosystem resources [both] <p>And no additional safeguarding:</p> <ul style="list-style-type: none"> ▪ No patents claimed, no dyadic contracts [both] ▪ Partnership management not bypassed [both]
A4	<p>Moderate (initially):</p> <ul style="list-style-type: none"> ▪ <i>Slight extension of platform functionality:</i> A4 connects a few satellite biomedical systems via Alpha's middleware to the ERP systems of clients [Alpha] ▪ <i>Revenue from small implementation projects:</i> Small-scale implementation projects connecting some satellite systems with the ERP systems of biomedical companies [both] <p>Substantial (later):</p> <ul style="list-style-type: none"> ▪ <i>Major extension of platform functionality:</i> A4 connects specialized, satellite biomedical systems via Alpha's middleware to the ERP systems of clients; A4's expertise introduces Alpha's middleware to the biomedical industry [Alpha] ▪ <i>Revenue from major, joint implementation projects:</i> Large-scale implementation projects to integrate the specialized satellite systems and the ERP systems of biomedical companies; Long-term and large-scale maintenance projects for the integrated systems [both] ▪ <i>Substantial flow of license fees:</i> Alpha wins over new customers for the platform because they want to leverage A4's specialized biomedical systems expertise; Five-figure annual license fees (€) per customer [both] 	<p>Limited time and effort (initially):</p> <ul style="list-style-type: none"> ▪ No intense interpersonal interaction between liaison and partnership manager [both] ▪ Standard-based governance focusing on arranging remote access to standard ecosystem resources [both] <p>And no additional safeguarding (initially):</p> <ul style="list-style-type: none"> ▪ No patents claimed, no dyadic contracts [both] ▪ Partnership management not bypassed [both] <p>Substantial time and effort (later):</p> <ul style="list-style-type: none"> ▪ Intense interpersonal interaction between A4's liaison and Alpha's partnership manager [both] <p>But no additional safeguarding (later):</p> <ul style="list-style-type: none"> ▪ No costs for concluding dyadic contract and claiming patents [both] ▪ Flexibility through stretching and leap of faith-like resource contributions by A4 [both]
B1	<p>Moderate:</p> <ul style="list-style-type: none"> ▪ <i>Slight extension of platform functionality:</i> Highly secure collaboration software that allows import of documents (e.g., reports, bills, etc.) from Beta's ERP platform [Beta] ▪ <i>Revenue from small implementation projects:</i> One-off projects for configuring data import for highly confidential projects, e.g., M&As [B1] ▪ <i>Limited flow of license fees:</i> Four-figure license fees (€) for the limited time when confidentiality requirements at client companies are 	<p>Limited time and effort:</p> <ul style="list-style-type: none"> ▪ No intense interpersonal interaction between liaison and partnership manager [both] ▪ Standard-based governance focusing on arranging remote access to standard ecosystem resources [both] <p>But additional safeguarding:</p> <ul style="list-style-type: none"> ▪ Costs for hiring a leading patent law firm and a patent agent to delineate B1's intellectual property from the intellectual property of Beta

	unusually ambitious [B1]	[both] <ul style="list-style-type: none"> ▪ B1 builds up a network of contacts to regional Beta units, thereby bypassing the official partnership manager [both]
B2	<p>Moderate (initially):</p> <ul style="list-style-type: none"> ▪ <i>Slight extension of platform functionality:</i> B2 extends Beta's ERP platform with a basic production management system (PMS) tailored to the needs of the meat processing industry [Beta] ▪ <i>Revenue from small implementation projects:</i> Small-scale implementation projects at small-and-medium sized meat processing companies [B2] ▪ <i>Limited flow of license fees:</i> Four-figure annual license fees (€) per customer [B2] <p>Substantial (later):</p> <ul style="list-style-type: none"> ▪ <i>Major extension of platform functionality:</i> B2 extends Beta's ERP platform with a comprehensive production management system (PMS) tailored to the needs of the meat processing industry; B2's PMS supports the entire value chain, making integration with Beta's ERP platform operationally important for meat processing companies [Beta] ▪ <i>Revenue from major, joint implementation projects:</i> Beta wins over leading meat processing companies as new clients for its ERP platform because the clients want to license B2's PMS; major implementation projects and long-term maintenance projects at meat processing companies with a large number of sites (e.g., farms, slaughterhouses, packaging companies, etc.); long-term production management optimization projects [both] ▪ <i>Substantial flow of license fees:</i> Five-figure annual license fees (€) per customer of PMS/ERP platform installations [both] 	<p>Limited time and effort (initially):</p> <ul style="list-style-type: none"> ▪ No intense interpersonal interaction between liaison and partnership manager [both] ▪ Standard-based governance focusing on arranging remote access to standard ecosystem resources [both] <p>But additional safeguarding (initially):</p> <ul style="list-style-type: none"> ▪ Costs for handling intellectual property [both] ▪ B2 builds up a network of contacts, thereby bypassing the official partnership manager [both] <p>Substantial time and effort (later):</p> <ul style="list-style-type: none"> ▪ Intense interpersonal interaction between liaison and partnership manager [both] <p>And additional safeguarding (later):</p> <ul style="list-style-type: none"> ▪ Costs for negotiating customized dyadic contracts guaranteeing B2's right to market its solution via Beta's sales channels [both] ▪ Costs for negotiating customized dyadic contract guaranteeing B2's membership in sector value web ▪ Costs for negotiating customized contracts guaranteeing B2 adequate implementation support from Beta [both] ▪ Costs for negotiating customized contracts to oblige Beta to perform the maintenance of B2's PMS at client sites [both]
B3	<p>Moderate:</p> <ul style="list-style-type: none"> ▪ <i>Slight extension of platform functionality:</i> Multi-lingual configuration of the trade module of Beta's ERP platform [Beta] ▪ <i>Revenue from small implementation projects:</i> One-off trade-module configuration projects at firms trading between countries [B3] ▪ <i>Limited flow of license fees:</i> No fees from proprietary software; occasional 	<p>Limited time and effort:</p> <ul style="list-style-type: none"> ▪ No intense interpersonal interaction between liaison and partnership manager [both] ▪ Standard-based governance focusing on arranging remote access to standard ecosystem resources [both] <p>But additional safeguarding:</p> <ul style="list-style-type: none"> ▪ Costs for negotiating contracts to delineate

	remunerations from Beta [B3]	<p>responsibilities in configuration projects—with B3 trying to appropriate large parts of the required services related to configuration of the trade module of Beta’s platform [both]</p> <ul style="list-style-type: none"> ▪ B3 builds up a network of contacts to Beta’s sales and business development workforce, thereby bypassing the official partnership manager [both]
B4	<p>Moderate (initially):</p> <ul style="list-style-type: none"> ▪ <i>Slight extension of platform functionality:</i> B4 extends Beta’s ERP platform with a basic point-of-sale system for the retail industry [Beta] ▪ <i>Revenue from small implementation projects:</i> Small-scale implementation projects at small-and-medium sized retailers [B4] ▪ <i>Limited flow of license fees:</i> Four-figure annual license fees (€) per customer [B4] <p>Substantial (later):</p> <ul style="list-style-type: none"> ▪ <i>Major extension of platform functionality:</i> B4 extends Beta’s ERP platform with a point-of-sale system tailored to the needs of the retail industry; B4’s point-of-sale system is operated in the retail stores of decentralized, independent merchants—for which Beta does not offer a dedicated solution [Beta] ▪ <i>Revenue from major, joint implementation projects:</i> Beta wins over leading retail chains as new clients for the ERP platform because clients want to license B4’s point-of-sale system; major implementation projects and long-term maintenance projects at retail chains with a large number of stores; long-term point-of-sale optimization projects [both] ▪ <i>Substantial flow of license fees:</i> Five-figure annual license fees (€) per customer of point-of-sale system/ERP platform [both] 	<p>Limited time and effort (initially):</p> <ul style="list-style-type: none"> ▪ No intense interpersonal interaction between liaison and partnership manager [both] ▪ Standard-based governance focusing on arranging remote access to standard ecosystem resources [both] <p>But additional safeguarding (initially):</p> <ul style="list-style-type: none"> ▪ B4 builds up a network of contacts thereby bypassing the official partnership manager [both] <p>Substantial time and effort (later):</p> <ul style="list-style-type: none"> ▪ Intense interpersonal interaction between liaison and partnership manager [both] <p>And additional safeguarding (later):</p> <ul style="list-style-type: none"> ▪ Costs for negotiating customized dyadic contracts guaranteeing B4’s right to market its solution via Beta’s own sales channels [both] ▪ Costs for negotiating customized dyadic contracts to guarantee adequate implementation and maintenance support from Beta’s technical workforce [both] ▪ Costs for negotiating customized contracts to regulate complex software liability questions [both] ▪ Cost for negotiating detailed non-competition clauses between B4 and Beta [both]

APPENDIX D: SUMMARY OF CODES AND CATEGORIES USED THROUGHOUT THE DATA ANALYSIS

Adapted from Berente et al. (2016)

First Round of Coding for Initial Submission (2010-Summer 2014)
<p>Codes: knowledge sharing, identification, long-term orientation, reciprocity, risk-taking, contracting costs, sales, partner program, benefits of partner program, definition of accurate behavior, foster mutual success, invest in partnership, emphasis on communication, efficient management of partnership, commitment to fair cooperation, trust in platform owner, trustworthiness of platform owner, trust in boundary spanner, respecting values, neglecting values, executing rules, bypassing rules</p>
<p>Categories: relational outcomes, economic outcomes, trust, network rules, network values, practicing network rules, practicing network values,</p>
Second Round of Coding for new Paper With Stronger Focus on Governance (Fall 2014-Summer 2015)
<p>Codes: Espoused rules, espoused values, passively executing rules, passively executing rules while emphasizing values, pro-actively executing rules, violating values by amending rules, stretching rules while favoring values, access to resources, nature of access to resources, no trust, mutual trust, one-side trust, finely customized solutions, client loyalty due to close engagement, fast implementation of the solution, effort for navigating around official partner management, effort for negotiating and specifying dyadic contracts</p>
<p>Categories: Ecosystem-wide governance, governance practices, dyadic governance, trust, instances of value co-creation, governance extra costs</p>
Third Round of Coding for Refined Governance Paper (Summer 2015-Winter 2016)
<p>Codes: Passively executing rules, passively executing rules while emphasizing values, pro-actively executing rules, violating values by amending rules, stretching rules while favoring values, joint customer projects, new flow of software license fees, jointly addressing a new niche through new features/customized solutions, effort for negotiating and specifying dyadic contracts, effort for intense interpersonal interaction, effort for navigating around official partner management, value co-creation potential, complementor's resource constraints, self-reinforcing process of efficiently co-creating value, self-reinforcing process of inefficiently co-creating value</p>
<p>Categories: Practicing ecosystem-wide governance, ecosystem-wide rules and values, substantial vs. moderate co-created value, substantial vs. moderate governance costs, necessary conditions, self-reinforcing cycles</p>
How Final Codes and Categories of the Process Model Answer our Research Questions (Summer 2016)
<p>Which practices better address the governance tension?</p> <ul style="list-style-type: none"> - There are two routes of governance. The arm's length route is associated with low governance costs but only moderate co-created value, whereas the dyadic route is associated with substantial co-created value but higher governance costs - On both routes partnership managers can address the dyadic governance tension more successfully if their practices are sensitive to values <p>Why do different practices better address the tension?</p> <ul style="list-style-type: none"> - Two alternative cycles play a key role for successfully addressing the tension. Because relational capital and the tendency to renounce safeguards increase in the virtuous cycle and decrease in the vicious cycle, value-sensitive practices better address the dyadic governance tension than practices not sensitive to values <p>Why do practices change and solidify over time?</p> <ul style="list-style-type: none"> - Whether or not partnership managers are willing to go beyond the rules is driven by two necessary conditions. - The alternative cycles feed into necessary conditions, thereby explaining shifts as to how rules are practiced, and stable paths as to how values are practiced: <ul style="list-style-type: none"> o Shifts: The virtuous cycle nurtures one of the necessary conditions for going beyond the rules, explaining the organic transition from executing rules to going beyond the rules o Stable paths: Value-sensitive practices and the associated virtuous cycles create the conditions for value-sensitive practices in the future, whereas not-value-sensitive practices and the associated vicious cycles create the conditions for not-value-sensitive practices in the future

APPENDIX E: NARRATIVES FOR CASES A3, B3, A4, AND B4

In the body of the paper, we provide evidence from all eight cases through a number of tables. Moreover, we illustrate each of the four patterns with one representative case narrative. Here, we provide shorter case narratives of the other four cases.

Pattern 1: From Passively to Proactively Executing Rules at Alpha and Complementor A3

A3 is a university spin-off founded in 1999. A3 began partnering with Alpha in 2006 and has remained on the silver level since then. A3 is a provider of ontology-based software products for knowledge workers. Their core product offers an ontology-based expert system along with an ontology-based knowledge retrieval tool. A3 builds on Alpha's analytics platform, which offers search algorithms for crawling documents. A3's solution helps to sort documents by mapping them to ontology concepts.

At the beginning of the partnership, A3 integrated its solution with Alpha's analytics platform based on the available standard APIs. The integration proceeded smoothly. Whenever needed, A3 found technical help at the various online information platforms that Alpha offers to all complementors. Meanwhile, Alpha's partnership manager remained in the background. He saw his main responsibility in strictly following ecosystem-wide rules by providing access to standard ecosystem resources through the self-service partner portal:

"I understand my job as being a moderator, as someone who is responsible for the navigation of the partnership [...]. [But] oftentimes, partners have the erroneous belief that the big company [Alpha] with its huge sales force sells their products [for them]. But that does not work" (partnership manager).

Although staying passive in executing rules, Alpha's partnership manager stressed the importance of mutual trust when interacting with A3's liaison—one of the key values stated in Alpha's partner program:

Emphasizing VALUE 4: "[I told A3's liaison]: 'Just give me a chance. [...] And if we manage to trust each other, many things are just easier'" (partnership manager).

This verbal commitment to values had a strong impact on the partnership. A3's liaison developed trust in the partnership manager and saw him as the key representative of Alpha for A3:

"Trust was present relatively quickly" (liaison).

"In principle, we do not partner with [Alpha], but with [the partnership manager]. [...] He is our anchor and scout" (liaison).

A3 began to intensify its investments related to Alpha's platform and, at the same time, sought to gain new customers. Eventually, A3's upfront investment paid off. A3 won a number of new joint customers in 2007, which had an immediate impact on how Alpha's partnership manager viewed the relationship:

"First, we were very skeptical about [A3]. We had doubts [as to whether] their software product would really neatly fit to us. [...] But then [A3] immediately made an enablement for [platform capability X], and directly afterwards for [platform capability Y]. [...] Then, they suddenly reached out to us, saying they had some [joint] customers for us [...]. They even smuggled us into a customer that is traditionally infested with products of [competitor of Alpha] [...]. [A3]'s attitude is 'Ok, I'll figure something out'" (partnership manager).

The joint success further strengthened trust between Alpha and A3. Alpha's partnership manager became more engaged in the partnership. For example, in 2008 he actively provided A3 access to untapped resources:

"I invite [A3 and other selected complementors] to networking events, e.g., a 'speed dating event.' At these events, the partner can meet a reseller or another partner and they have five minutes to figure out if the other party is interesting. This allows the partners to cultivate many contacts" (partnership manager).

This gradual shift in practices was fueled by the partnership manager's expectation of future business success:

"Joint successes are always good [...] and I have selected [A3 to be treated more proactively] because we can make a lot of revenue with this partner" (partnership manager).

The partners co-created moderate value (e.g., from implementation projects of the knowledge retrieval platform at SMEs), while keeping governance costs low. Trust seemed to play a key role for this:

"Once you have successfully built trust, many things just go smoother" (liaison).

Pattern 2: Passively Executing Rules at Beta and Complementor B3

The partnership between B3 and Beta started in 2003, shortly after B3 was founded. Since then, B3 had remained on the silver level. B3 specializes in configuring the foreign trade module of Beta's ERP platform. B3's customization services focus on companies that trade goods between three particular European countries and that are in need of multi-lingual configuration services of that module.

At the beginning of the partnership, B3 had to prove its ability to correctly configure Beta's foreign trade module. To achieve this, B3 had to run multiple customer scenarios on a dedicated test and demonstration system provided by Beta. Access to these technical standard ecosystem resources was stipulated by the partner program (RULE 1). Beta's partnership manager acted in accordance with the partner program, yet he remained rather passive and pointed to the resources upon request:

"We do not contact [complementors like B3] proactively. [...] Partnership managers help them on request [...] when the complementors get in touch with them by phone or e-mail etc." (partnership manager).

In light of this passivity, B3's liaison noted that for Beta, B3 is just one of many partners that are, in principle, exchangeable for Beta:

"No, I really wished they would be [as dependent [on] us as we are [on] them]. But that is of course not the case. We are interchangeable for them" (liaison).

"We only do configurations of [Beta]'s platform. [...] Of course, [Beta] can send someone from the headquarters [with similar expertise]" (liaison).

Over time, however, B3 developed specific expertise on how to conduct the multi-lingual configuration services for companies that traded goods between those three particular European countries. For example, B3's employees regularly updated their knowledge on specific regulatory requirements needed for trading between the countries; they also developed expertise about exemption limits and allowances for particular goods and services. Also, for all these configurations, B3 developed industry-specific language skills.

Drawing on its acquired expertise, B3 sought to intensify business with Beta and its clients. B3 tried to gain access to additional Beta resources and get in touch with other representatives of Beta (i.e., by bypassing the official partnership manager). These attempts did not remain unnoticed by Beta's partnership manager, but he remained rather passive and did not actively engage in any closer collaboration:

"[B3] surely seeks to get closer to us. They definitely look out for contacts" (partnership manager).

"[B3's employees even] stop by to meet people from our sales force or from business development in person" (partnership manager).

Whereas B3 actively attempted to access Beta's resources, the complementor stayed rather passive in terms of upfront investments in complementary products and sales activities.

"We are not proactive; we are careful and tend to wait and see" (liaison).

Overall, irrespective of the long-term relationship, the partnership stagnated in terms of economic success and co-created value. B3 delivered value to its existing customers by enabling swift, multi-lingual implementations and updates of customized client solutions. However, B3 did not invest in expanding business, e.g., through increasing the service portfolio with additional languages or other service features. Beta was not willing to step in with additional resources. Also, the partnership suffered from some governance inefficiency due to B3's practice of bypassing the partnership manager to get access to resources through other Beta representatives.

Pattern 3: From Passively Executing Rules to Stretching Rules at Alpha and Complementor A4

A4 was founded in 1999 and became a silver partner of Alpha soon after. The company specializes in building secure middleware solutions for small and medium-sized (SMEs) life science companies based on Alpha's platform.

At the time when the partnership began, many life science SMEs were faced with the challenge of securely linking their ERP systems with a multitude of satellite biomedical systems. This created a security puzzle of integrating many system components. A4 was one of only two companies in its home market that had the expertise to solve this puzzle, while still complying with security regulations (PA-A4-3). Alpha's middleware played a key role as an enabling technology for this integration and security task. In order to acquire the respective know-how on Alpha's platform, A4 drew on the technical standard ecosystem resources, as defined in the partner program. The partnership manager facilitated access to these resources. While he mostly acted upon requests made by A4, he did so in a very committed way, seeking to act in accordance with ecosystem-wide values:

Executing RULE 1, RULE 2: "After the partner has been recruited, there are clear rules about what the partner gets and needs to deliver. In the end, this is some sort of contract, formalities. And this is a good thing, because these rules make us predictable for the [complementors]. The [complementors] know exactly what they can expect from us" (partnership manager).

Emphasizing VALUE 2: "Especially in the beginning of a partnership, the essence of governance is keeping promises and demonstrating extreme timeliness and reliability" (partnership manager).

A4's liaison appreciated the fact that Alpha's partnership manager sought to mobilize all formally defined resources and live up to partnership values:

"[Alpha] takes a lot of trust-building actions. As an example, they support us in pre-parameterizations of platforms" (liaison).

In response, A4 also sought to act in accordance with the spirit of a true partnership. For example, A4 only hired employees with several years of experience for configuring Alpha's middleware platform. Although A4 was only a small company, its employees were proud of having more than "200 man-years of experience" (PI-A4-2) in A4's area of expertise. Leveraging their combined resources, the partnering companies began acquiring their first joint projects in 2005. In 2007, Alpha lifted A4 to the gold level. Despite this acknowledgement by Alpha and the proven success of the partnership, A4 seemed unwilling to fully commit its resources to Alpha's platform:

“Well, if [Alpha] leaves us high and dry, then we stand there naked. [Alpha] can heavily influence our revenue—but also that of our competitors” (partnership manager).

This reluctance on the part of A4 to fully trust Alpha began to vanish when A4 realized that Alpha’s partnership manager had started to pull out all the stops for the partnership. During 2008, The partnership manager started to proactively provide A4 with untapped resources of the partner program. This enabled the parties to increase their footprint in the growing life sciences industry.

In light of this growing success the partnership manager even started to provide A4 with resources beyond what was stipulated in the partner program. The reason for this gradual change in practices was that Alpha had identified A4’s business niche as a key growth market and recognized that providing A4 with access to additional resources would help to nurture the growth of the joint business. And since A4 had come to trust Alpha, it was willing to further deepen the partnership without insisting on contractual safeguards.

“One consequence of the trusted relationship was that we received a lot of support, including financial support, from [Alpha]. This is definitely based on trust. Even partners that are considerably larger than we are do not receive as much support as we do” (liaison).

One example for providing access to additional resources was when Alpha’s partnership manager activated financial resources for A4 without requesting compliance with some formal eligibility criteria:

“[I was] parking marketing program money [...when] at the end of the quarter there was still budget left without demanding a formal proposal from [A4]” (partnership manager).

Moreover, in 2009, when A4 was close to going out of business because of the payment defaults of a major joint client, the partnership manager accommodated A4 with marketing money to bridge the short-term liquidity problems. The partnership manager was well aware that A4 would not use this money for marketing purposes, but sought to “avoid the embarrassing situation of not being able to pay salaries at the end of the month” (partnership manager). In general, the partnership manager acted in accordance with the spirit of ecosystem-wide values, even if this meant going beyond the rules:

Favoring VALUE 4: “I am not a friend of simply following clear rules [...and] formalisms. [...] Rules are not the issue, the issue is trust. [Therefore,] I have to personally demonstrate ‘I am ok, and so are you’” (partnership manager).

Such flexible stretching of the rules of the partner program in favor of values greatly increased A4’s trust in the partnership manager, as well as in Alpha:

“I would call the relationship with [Alpha] trustful. And even more, the relationship with [partnership manager]” (liaison).

The partnership manager also stressed that one of the key advantages of stretching rules is that it eases coordination between the partners and relieves both parties from the need to settle contractual agreements:

“It’s about ‘ease-of-doing-business-with’. That is a key factor for partners. And it is my job to find shortcuts for the partner to deal with such a cumbersome company as [Alpha]” (partnership manager).

“Once you trust each other, the formal stuff fades into the background. I mean, we are not contractually obliged to bring business opportunities to [Alpha]. However, since we live this partnership, we try to get [Alpha] on board whenever we think it makes sense. This is really about trust, not about contractual agreements” (liaison).

“So, why is it important to build trust and to demonstrate trustworthiness? Because it allows you to say, ‘Let’s seal this with a handshake, let’s simply give it a try’” (liaison).

This flexible way of living the partnership enabled both parties to keep pace with the market for ERP systems for life science companies, which “grew into a multi-million dollar market” (liaison) in A4’s home market. The partnering companies frequently had joint projects and were able to rapidly seize novel business opportunities. At the same time, they were able to keep governance costs at a manageable level.

Pattern 4: From Passively Executing Rules to Amending Rules at Beta and Complementor B4

B4 was founded in 2000 and became a silver partner of Beta shortly after. B4 is a leading provider of point-of-sale systems for the retail industry. B4’s core product maintains a sales history for each sales item and allows for the analysis of sales data. The product is integrated with Beta’s ERP platform—especially the platform’s inventory management module. It also uses Beta’s middleware platform to connect its clients’ backend systems and data input devices, such as barcode scanners, with its own product and the ERP platform.

The partnership started with the certification of B4’s solution. For this purpose, B4 relied mostly on the technical resources defined in the partner program, such as automated testing tools. When B4 needed help, the partnership manager directed B4 to Beta’s online portals, where most of B4’s questions could be satisfactorily answered. Thus, during the certification process, Beta’s partnership manager remained rather passive, closely following the rules to the letter:

“[Usually] there are very clear rules. There are the partner contracts and also associated processes [...] you have to adhere to. [...] These things are not up for discussion” (partnership manager).

After B4’s solution had been certified, B4 was one of the most sophisticated point-of-sale solution providers in the retail industry. For example, B4 developed its own data bus system to enable seamless linkages between all in-store devices, such as checkout systems, scanners, and cash registers. Moreover, B4 continuously tweaked its solution to better fit with the specific requirements of cooperatives and franchise companies. For example, cooperatives and franchise companies are often highly decentralized organizations, with many independent merchants requiring unique data views to analyze both individual and multiple stores.

During this time, the partnership manager remained passive; rather than actively approaching B4, the partnership manager only acted upon request and then redirected B4 to online partner portals. This passivity increasingly disappointed B4; it did not meet B4’s expectations of a true partnership. In fact, B4’s liaison described the partnership with Beta as troublesome and negative:

“It was horrible, absolutely horrible” (liaison).

The partnership got stuck. B4’s liaison knew that in order to gain really big customer accounts, a tighter integration with Beta’s platform was necessary. However, B4 was not willing to make such an upfront investment—particularly as Beta showed no interest in stepping in with its own resources. In fact, B4 even feared that Beta might take selfish advantage of B4’s one-sided investments:

“[The situation used to be:] If we commit too much to [Beta], they crush us” (liaison).

The situation changed when B4 was about to acquire a major retailer with several thousand stores as a client in 2008. This retailer demanded a deep integration with Beta’s platform. At the beginning of 2009, the partnership manager reacted by lifting B4 to the gold level, thereby providing access to additional resources. However, B4 was only willing to contribute its own required resources on the condition that Beta would bindingly guarantee permanent and exclusive access to resources beyond those stipulated in the ecosystem rules:

"What we said to [Beta] is: 'Either you sell our product via your price list [sales channel], or we will not intensify the partnership'" (liaison).

Faced with the opportunity to gain a big customer, Beta's partnership manager was willing to give in and granted exclusive access to resources. However, as the partnership agreement did not foresee such exclusive rights, the partnership manager went beyond ecosystem rules by arranging a dyadic contract. The dyadic contract guaranteed B4 the right to market its solution via Beta's own sales channels and to receive implementation and maintenance support from Beta's technical workforce. Beta even agreed to bear responsibility for B4's *"liabilities of the software, and bound itself by contract to not offer a 'competing product'" (liaison)*. Notably, the partnership manager accepted these terms, despite knowing that such exclusive agreements violated partnership values, and were at odds with the ecosystem logic:

"We try to keep them [the contracts] as standard as possible. But [some partners] have more muscle, more to negotiate. [...] There is one aspect that is key for that: We don't want to create discrimination between partners. That's why the more standardized the better" (partnership manager).

The concluded dyadic contract increased the willingness of B4 to commit platform-specific resources to the partnership. B4 bindingly agreed to develop product innovations specifically tailored to Beta's ERP platform. For instance, B4 integrated all store-level devices, such as scanners and cashiers, to the inventory control system of Beta's ERP platform. Moreover, B4 integrated its software with the business intelligence module of the ERP platform. This gave clients insights into the technical and commercial performance of each store via customizable dashboards. Accordingly, B4's solution became increasingly valuable for retailers, so that B4's liaison quite confidently claimed to be *"the operating system of the retail industry" (liaison)*.

As a result, Beta and B4 not only succeeded in acquiring this particular big customer, but together acquired several major retailers with an aggregated number of stores exceeding 20,000. Some of the new clients even chose Beta's ERP platform due to the value added by B4's solution. Without B4's add-on, the ERP platform was not able to offer a *"compelling solution for retailers with many stores" (PD-B4-5)*.

Despite these achievements, B4's liaison remained skeptical about the trustworthiness of Beta:

"With certain persons, we have built good interpersonal relationships. And in the end, professional partnerships are human-made. And if you trust each other, then you simply trust each other. Yet, this is clearly bound to certain persons" (liaison).

Accordingly, the exchange and bundling of resources only occurred on the basis of the dyadic contract. Both parties strictly avoided any informal contributions of resources for the benefit of the other party. As an example, when B4 took notice of rumors that Beta was planning to acquire a U.S.-based company in 2010, B4 avoided sharing its concerns with Beta. B4's liaison knew that the software of the target firm *"was just not ripe for a [heterogeneous] market like Europe [...] and [that] this was known among industry experts,"* but B4 decided *"to watch and wait."* B4 expected Beta to come to this conclusion on its own, but Beta did not, and hence spent millions of dollars on the acquisition. Eventually, Beta entirely stopped developing and supporting the product of the acquired company.

This lack of information sharing reflects the lack of mutual trust between B4 and Beta. The formal character of the relationship between B4 and Beta required the drafting and negotiation of *"customized contracts" (liaison)*, which required significant extra time and effort from both parties. Thus, although both parties eventually succeeded in co-creating substantial value, this was achieved at the expense of high governance costs.

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