

MOTIVATIONS FOR BUSINESS NETWORKING AND THE EFFECTUATION CAUSATION APPROACH TO ENTREPRENEURSHIP

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Abstract

Objective: To describe possible distinct effects between the causation and effectuation approach regarding the perception of factors that motivate business networking.

Method/Approach: We present a quantitative research carried out through convenience sampling, a type of non-probabilistic sampling. We conducted a factor analysis and analysis of variance (ANOVA).

Originality/Relevance: There are only a few studies that associate the engagement of entrepreneurs in networks with entrepreneurial actions guided by the two different logics: causation, which emphasizes the selection of means to create the desired effect; and effectuation, which emphasizes possible effects to be created through the means available.

Main findings: The findings show that there are significant differences between causal and effectual approaches to entrepreneurship and factors that motivate the participation in networks. The causal and effectual logic are not mutually exclusive; however, the intensity in each one entailed differences in the factors that motivate entrepreneurs to engage in networks. The research shows that causal and effectual entrepreneurs were motivated to participate in networks focusing mainly on benefits for the company.

Theoretical/Methodological contributions: This research contributes not only to network studies, but also to entrepreneurship, considering that it highlights possible differences among the factors that motivate the insertion in networks by causal and effectual entrepreneurs. In addition, our study also explored the effect of different control variables on the perception of benefits from networking; these variables, however, had no influence on the perception of such benefits.

Keywords: Networks. Entrepreneurship. Causation. Effectuation.

MOTIVADORES DA IMERSÃO EM REDES E ABORDAGENS EMPREENDEDORAS CAUSAL E EFFECTUAL

Resumo

Objetivo do estudo: Descrever possíveis efeitos distintos entre as lógicas Causation e Effectuation na percepção de fatores que motivam a participação de empreendedores em redes.

Metodologia/abordagem: A pesquisa foi quantitativa, descritiva, com amostra não probabilística por acessibilidade. Os dados foram submetidos à análise fatorial e ANOVA.

Originalidade/Relevância: São escassos os estudos que associam a imersão dos empreendedores em redes à ação empreendedora com base em diferentes lógicas: ação causal, que enfatiza a seleção de meios para a criação do efeito desejado e a ação effectual, que enfatiza possíveis efeitos a serem criados com os meios disponíveis.

Principais resultados: Os resultados mostraram que há diferenças significativas entre estilos de ação empreendedora causal e effectual e fatores que motivam a participação em redes. As lógicas causal e effectual não se mostraram excludentes, entretanto, a intensidade de cada uma apresentou

diferenças quanto aos fatores que motivam empreendedores à participação em redes. A pesquisa mostrou que empreendedores orientados pela ação causal ou effectual foram motivados a participar em redes, focando principalmente em expectativas de benefícios para as empresas.

Contribuições teóricas/metodológicas: A contribuição aplica-se tanto ao estudo de redes, como também do empreendedorismo, por evidenciar possíveis diferenças entre os fatores que motivam a inserção em redes por empreendedores orientados pelo pensamento causal e empreendedores orientados pelo pensamento effectual. Além disso, o estudo explorou o efeito de diferentes variáveis de controle sobre a percepção de vantagens para imersão em redes e identificou que elas não exerceram influência.

Palavras-chave: Redes. Empreendedorismo. Causation. Effectuation.

MOTIVADORES DE INMERSIÓN EN REDES Y ENFOQUES EMPREENDEDORES CAUSAL Y EFFECTUAL

Resumen

Objetivo del estudio: Describa los posibles efectos diferentes entre la lógica de causation y de effectuation en la percepción de los factores que motivan la participación de los empresarios en las redes.

Metodología: La investigación fue cuantitativa, descriptiva, con una muestra no probabilística debido a la accesibilidad. Los datos fueron sometidos a análisis factorial y ANOVA.

Originalidad / Relevancia: Existen pocos estudios que asocian la inmersión de los empresarios en redes con la acción empresarial basada en diferentes lógicas: la acción causal, que enfatiza la selección de medios para crear el efecto deseado; y, la acción effectual que enfatiza los posibles efectos que se crearán con los medios disponibles.

Principales resultados: Los resultados mostraron que existen diferencias significativas entre los estilos de acción empresarial "causal" y effectual y los factores que motivan la participación en las redes. Las lógicas causal" y effectual no eran mutuamente excluyentes, sin embargo, la intensidad de cada una mostró diferencias con respecto a los factores que motivan a los empresarios a participar en las redes. La investigación mostró que los empresarios guiados por acciones causal o effectual estaban motivados para participar en redes, centrándose principalmente en las expectativas de beneficios para las empresas.

Contribuciones teóricas / metodológicas: La contribución se aplica tanto al estudio de las redes, como al emprendimiento, ya que resalta las posibles diferencias entre los factores que motivan la inserción en las redes de emprendedores guiados por el pensamiento causal y emprendedores guiados por el pensamiento effectual. Además, el estudio exploró el efecto de diferentes variables de control sobre la percepción de ventajas para la inmersión en redes y demostró la ausencia de diferencias.

Palabras clave: Redes. Emprendimiento. Causation. Effectuation.

Cite as / Como citar

American Psychological Association (APA)

Fabris, J., Aoki, V. G., Machado, H. P. V., & Carvalho, C. E. (2021). Motivations for business networking and the effectuation causation approach to entrepreneurship. *Iberoamerican Journal of Strategic Management (IJSM)*, 20, 1-26, e17574. <https://doi.org/10.5585/riae.v20i1.17574>.

(ABNT – NBR 6023/2018)

FABRIS, J.; AOKI, V. G.; MACHADO, H. P. V.; CARVALHO, C. E. Motivations for business networking and the effectuation causation approach to entrepreneurship. *Iberoamerican Journal of Strategic Management (IJSM)*, v. 20, p. 1-26. 2021. <https://doi.org/10.5585/riae.v20i1.17574>.

Introduction

Studies on networks tend to explore the influence of social action on economic structures, focusing mainly on the comprehension of social immersion (Granovetter, 1985, 2007). It is believed that social actors, jointly, can influence economic structures (Granovetter, 1985). Such assumption was spread throughout different fields of study and fostered by the fact that networks widely affect the contemporary social structure (Castells, 1999), which is in constant pursuit of “connectionism” (Kirschbaum, 2015).

The term networks may comprise several different types of arrangements, such as social networks, business networks, or franchise network (Isaac, Melo, & Borini, 2018). Moreover, networks can be established in person or virtually (Sánchez, Schmidt, Zuntini, & Obiol, 2017). Regardless of the type, every network is characterized by dissemination of information (Sánchez et al., 2017).

Networks constitute environments for knowledge production and learning (Hoffman, Molina-Morales, & Martinez-Fernandes, 2007; Ouro Filho et al., 2020; Sánchez et al., 2017) and contribute to increasing the competitiveness of companies (Centenaro, Guedes, & Laimer, 2017). They constitute cooperative strategies of small- and medium-sized companies (Bortolaso, Verschoore, & Antunes, 2012; Wegner, Bortolaso & Zonatto, 2016) and, thus, started to become a strategy to stimulate the creation of new businesses or to strengthen existing ventures, especially regarding the promotion of innovation in small businesses (Vaghely & Julien, 2010).

As arrangements, networks can influence the action of entrepreneurs, but this action may also change according to different logics, among which one finds the causation and effectuation approaches (Sarasvathy, 2001; Fisher, 2012). While the causal action emphasizes the selection of means for the creation of a desired effect, the effectual action emphasizes possible effects that can be created through the means available (Sarasvathy, 2008). Considering that they constitute different logics of action, both consider that the action of entrepreneurs in networks may entail certain effects, such as innovation (Muñoz-Exposito & Sánchez-Franco, 2016), customer relationship (Rocha, Jansen, Lofti, & Fraga, 2013), among others. While from an effectuation perspective the entrepreneurial action results from commitments established in networks and relationships, for causal entrepreneurs, networks can become a means to achieve the desired effect; entrepreneurs, can, however choose to participate in these networks or not.

Thus, the research issue that guided our research was: Do effectual entrepreneurs give more importance to and are more motivated to participate in networks than causal entrepreneurs?

We did not identify studies that approached the immersion in networks by entrepreneurs considering both causal and effectual approaches. Prior research focused only on the effectual logic (Matta & Mello, 2014; Sarmiento, Carvalho, & Dib, 2016). In this way, our research aim is to describe

possible distinct effects between the causation and effectuation approaches regarding the factors that motivate entrepreneurs to engage in networks.

We present herein a quantitative research, in which retail entrepreneurs were surveyed. This paper is organized as follows. Over the next section, we will present a literature review on entrepreneurial action styles and immersion in networks, which guided the elaboration and choice of instruments to carry out the data collection. Information regarding the data collection will be detailed in the methodology section, which will be presented subsequently. After presenting the data and the analysis, we demonstrate our final considerations.

Entrepreneurial action styles and immersion in networks

Entrepreneurial action can be motivated by – at least – two distinct logics: causal and effectual (Fisher, 2012). Both acknowledge the participation of entrepreneurs in networks an important strategy, considering that for the effectual logic the network is an a priori element that influences the decision to undertake or not (Sarasvathy, 2001), whereas for the causal logic, the network can be an important resource to increase the competitiveness of the operating venture.

Main foundations of causal and effectual approaches

The terms causal and effectual were introduced by Sarasvathy (2001) in order to present distinct actions taken by entrepreneurs. By analyzing a group of successful entrepreneurs, two different logics were identified to solve the same problem (Sarasvathy, 2008). In short, for causal entrepreneurs, entrepreneurial action is oriented to control the desired future; for effectual entrepreneurs, entrepreneurial action stems from the effect created by the use of a set of means, relationships, and abilities, which aim at creating the desired future.

For causal entrepreneurs, the action is triggered by the desired goals or objectives, represented by the evaluation of the best return opportunities stemming from previous analyses and formulation of business plans. Control processes are adopted to better predict the future and ensure the fulfilment of preestablished objectives. Moreover, competitive and market analyses guide the elaboration of production and marketing plans, which are tested in different business models (Chandler, Detiene, Mckelvie, & Mumford, 2011; Fisher, 2012; Sarasvathy, 2008). In short, the causal approach is driven by the desired purposes and return expectations.

On the other hand, entrepreneurs whose action is guided by effectuation adopt as a starting point the reflection on who they are, who they know, and which knowledge they have (Sarasvathy & Dew, 2005). It is a logic guided by four principles: experimentation, flexibility, affordable loss, and pre-commitments (Sarasvathy, 2008). With the means at their disposal, individuals experience entrepreneurial action without previously defined objectives; they are guided, however, by how much each one is willing to lose. Through the establishment of strategic relationships, partnerships, and

commitments, entrepreneurs benefit from situations of uncertainty and contingencies and guide actions in a more flexible way (Fisher, 2012).

The effectual action applies to contexts of uncertainty and the relational behavior is inherent in it. It occurs because, in this acting dynamic, entrepreneurs – together – explore contingencies and, consequently, the entrepreneurial action is dependent on the actors (Sarasvathy, 2001). The result is a joint process among actors (Augier & Sarasvathy, 2004) through the combination of means and partnerships selected and established by them (Read & Sarasvathy, 2005).

Chandler et al. (2011) developed a scale to measure causal and effectual entrepreneurial action consisting of 20 items, which was previously translated and validated by Faia, Rosa and Machado (2014) and Machado, Faia and Silva (2016), as presented in Figure 1. The scale is divided into five dimensions. The first dimension, which comprises seven items, aims to evaluate the causation approach. The effectuation approach is assessed in four dimensions, namely: experimentation (four items), affordable loss (three items), flexibility (four items), and pre-commitments (two items).

Figure 1 – Scale to measure causal and effectual entrepreneurial actions

<i>Construct</i>		<i>Items</i>
<i>Causal</i>		<ul style="list-style-type: none"> • I analyzed long-term opportunities and selected those that offered the best return. • I developed a strategy to efficiently use available resources and capabilities. • I developed and projected a business plan. • I organized and implemented control processes to ensure the achievement of pre-established objectives. • I researched and selected target-markets and made a significant competitive analysis. • I had a clear and consistent vision of how far I would like to get. • I developed production and marketing actions plans.
<i>Effectual</i>	Experimentation	<ul style="list-style-type: none"> • I tried different products and different business models. • The product/service offered now is essentially the same that had been originally conceptualized. • The product/service offered how is substantially different from the one initially projected. • I tried several different methods until I found a business model that worked.
	Affordable loss	<ul style="list-style-type: none"> • I was careful not to commit more resources than I was willing to lose. • I was careful not to risk more money than I was willing to lose with the initial idea. • I was careful not to risk much money, which would have put the company in financial distress if things had not worked out.
	Flexibility	<ul style="list-style-type: none"> • I allowed the business to develop emergent (new) opportunities in addition to what had been planned. • I adapted what we were going to do according to the resources I had available. • I was flexible and took advantage of opportunities as they arose. • I avoided actions that restricted business' flexibility and adaptability.
	Pre-commitments	<ul style="list-style-type: none"> • I made use of several agreements with clients, suppliers, and other organizations and individuals to reduce uncertainty. • I made pre-commitments with clients and suppliers whenever possible.

Source: Based on Chandler, G. N., Detienne, D. R., McKelvie, A., & Mumford, T. V. (2011). Causation and effectuation processes: A validation study (p.382). *Journal of business venturing*, 26(3), 375-390.

Entrepreneurs do not act alone, regardless of the logic that guides their actions (Steyaert & Landström, 2011). Their actions in networks are represented by connections and relationships among the different actors, which favors the multiplicity of activities and contacts capable of transferring information (Granovetter, 1985). However, it is worth mentioning that networks are dynamic structures (Flecha, Silva, Fusco, & Bernardes, 2012); thus, participants may enter and leave the network spontaneously.

Factors that motivate entrepreneurs to network

Theory on business networks is based on the premise that the complex environment in which companies operate creates interdependence, which exacts from companies' cooperation and exchange. In this sense, networks are identified as an area for exchanging resources through transfers among actors (Humphry et al., 2019).

Amongst the effects identified from networking, it is possible to distinguish effects from the macro environment, from the organization, and from entrepreneurs. At the macro level, political and cultural effects (Beckert, 1999; Castells, 1999) were observed, as well as effects on the dynamization of territories (Vaghely & Julien, 2010), triggering social and economic transformations. In this research, the effects of the participation in networks restricted to the effects on entrepreneurs and on the company.

At the individual level, entrepreneurs can be motivated to social immersion because they consider that it might provide them with beneficial effects. One of the main effects mentioned in literature is the access to information and resources, allowing entrepreneurs to improve their technical capability (Manolova, Carter, Manev & Gyosheyv, 2007). The other effects mainly refer to empowerment, legitimation, and recognition as an entrepreneur (Pirotti, Bitencourt, & Wegner, 2017). The immersion in networks can also contribute to the exploration and development of business opportunities (Bergh, Thorngren, & Wincent, 2011; Vaghely & Julien, 2010). In addition, the relationship with other entrepreneurs may influence one's identity, producing effects on self-knowledge and self-confidence (Downing, 2005). Sharing business and management practices can help entrepreneurs gain more business confidence while consequently reducing the fear of failure in business. Moreover, networks are favorable environments for starting business partnerships (Machado, Jesus, Greatti, & Leal, 2011; Manolova et al. 2007), getting new contacts (Wharton & Brunetto, 2007), and market broadening (Machado & Jesus, 2010). The participation in networks can also contribute to improvements in the communication process among entrepreneurs (Silva & Angeloni, 2011).

Regarding the effects of social immersion on companies, previous studies indicated: a) financial benefits (Pirotti et al., 2017), access to finance and lines of credit (Hoffman, Molina-Morales,

& Martinez-Fernandes, 2008); b) consumer market expansion and increase of customer base (Balestrin & Verschoore, 2010; Monticelli, Garrido, & Vasconcellos, 2017), increase in sales and revenue (Claro & Laban, 2011), improvement to the product positioning (Balestrin & Vargas, 2004; Machado & Jesus, 2010), innovation in sales process and in product distribution (Muñoz-Exposito & Sánchez-Franco, 2016); c) influence on the internationalization of companies and on the opening of new subsidiaries (Monticelli et al., 2017); d) propensity to learn and innovate (Muñoz-Exposito & Sánchez-Franco, 2016), as well as improvement to personnel qualifications (Bergh et al., 2011); e) increase in the number of and improvement in the relationship with customers (Rocha et al., 2013); f) increase in business visibility (Moore & Buttner, 1997); and g) increase in the number of employees (Balestrin & Verschoore, 2010). Figure 2 summarizes the factors – and their respective authors – that can motivate entrepreneurs to take part in networks.

Figure 2 – Factors that motivate entrepreneurs to engage in networks

Factors	Authors
For entrepreneurs	
To favor self-knowledge	Downing (2005).
To improve communication skills	Silva & Angeloni (2010).
To broaden relationships and contacts	Rocha et al. (2013); Manolova et al. (2007).
To reduce the fear of failure	Downing (2005).
To improve self-confidence	Downing (2005).
To gain respect as entrepreneur	Pirotti et al. (2017).
To expand business vision	Machado & Jesus (2010).
To establish new partnerships	Machado et al. (2011), Wharton & Brunetto (2007).
To extend ties and cooperation in the network	Machado & Jesus (2010), Wharton & Brunetto (2007).
To increase technical knowledge through the access to information and resources	Manolova et al. (2007).
To increase market knowledge	Machado & Jesus (2010).
To improve planning skills	Machado et al. (2011).
To identify new business opportunities	Bergh et al. (2011), Vaghely & Julien (2010).
For the company	
To expand consumer market	Monticelli et al. (2017).
To improve product positioning	Machado & Jesus (2010), Balestrin & Vargas (2004).
To open new companies/subsidiaries	Monticelli et al. (2017).
To expand product mix	Balestrin & Verschoore (2010).
To increase business visibility	Moore & Buttner (1997).
To improve personnel qualification	Bergh et al. (2011).
To provide innovation in sales processes	Muñoz-Exposito & Sánchez-Franco, (2016).
To provide innovation in distribution processes	Muñoz-Exposito & Sánchez-Franco, (2016).
To improve financial results	Pirotti et al. (2017)
To increase revenue	Claro & Laban (2011).
To increase the number of employees	Balestrin & Verschoore (2010).
To increase customer base	Rocha et al. (2013); Balestrin & Verschoore (2010).
To provide access to finance	Hoffmann et al. (2008).

Source: Research data.

Figure 2 summarizes the effects arising from the participation of entrepreneurs in networks, which in turn can motivate entrepreneurs to engage in networking. Previous studies have shown a few effects on the performance of entrepreneurs considering several aspects. Initially, regarding entrepreneurial competencies, networks contribute to the increase of entrepreneurs' self-knowledge and self-confidence, reduction of the fear of failure, and increase of planning skills (Downing, 2005; Machado, 2011). All these aspects represent entrepreneurial competencies (Mitchelmore & Rowley, 2010). In addition, it was noted that networks increase entrepreneurs' competencies to identify and acknowledge opportunities. It occurs because the engagement in networks improves the access to information, resources, and market knowledge, favoring business vision and the identification of opportunities (Bergh et al. 2011; Manolova et al. 2007; Machado & Jesus, 2010; Vaghely & Julien, 2010). Another effect stemming from the engagement in networks regarding the entrepreneur associates with the possibility to improve communication and to increase contacts and relationship bases, as well as starting new partnerships and creating cooperation ties (Machado & Jesus, 2010; Manolova et al. 2007; Rocha et al. 2013; Silva & Angeloni, 2010; Wharton & Brunetto, 2007). In addition to strengthening communication and relational capabilities, networks may help entrepreneurs gain more respect (Pirotti et al. 2017).

One may also observe in Figure 2 that the participation in networks can impact the performance of companies, in the marketing area for instance. With this regard, studies have shown the following effects: market expansion, increased customer base, expansion of product mix, and improved product positioning (Balestrin & Vargas, 2004; Balestrin & Verschoore, 2010; Machado & Jesus, 2010; Monticelli et al., 2017; Rocha et al. 2013). Moreover, Muñoz-Exposito and Sánchez-Franco (2016) state that the engagement in networks may result in innovations in sales and product distribution. Still regarding performance, previous studies emphasized that networks provided means to improve financial and revenue results (Claro & Laban, 2011; Pirotti et al. 2017). Effects on company expansion were also highlighted, such as the increased number of employees and customers, the access to finance, and the opening of new branches (Balestrin & Verschoore, 2010; Hoffman et al. 2008; Monticelli et al. 2017).

Method

We present herein a quantitative and descriptive research approach in order to describe the possible distinct effects between the causation and effectuation logic considering the factors that motivate entrepreneurs to engage in networks.

The data collection instrument was the structured questionnaire (Appendix I) with open-ended and closed-ended questions divided into three different sections: (i) general profile of entrepreneurs and companies; (ii) measurement of entrepreneurs' actions (causal or effectual), as presented in Figure

1; and (iii) measurement of the effects that motivate the engagement in networks, as presented in Figure 3. We used a five-point Likert scale in the last two sections of the questionnaire. Furthermore, we used a few control variables, namely: gender, age, educational background, and years participating in the network.

We made use of a convenience sampling. We used the answered questionnaires of 42 retail entrepreneurs located in six different neighborhoods of the city of Chapecó, Brazil. We chose this location because it is a medium-sized city considered a regional pole of the westernmost region of the state of Santa Catarina and the seventh largest economy of the state (Instituto Brasileiro de Geografia e Estatística [IBGE], 2018). The focus on retail is justified by the high number of retail companies located in different regions of the city, which also provided easier access to entrepreneurs.

Considering the respondents' profile, 48% are women and 52% are men; the average age of the sample was 43 years (minimum age: 24; maximum age: 61); most of respondents are married (78,6%); most of them have only a high school diploma (35,7%), followed by diploma of higher education (33,3%). The entrepreneurial activities occurred between 14 and 51 years of age, the average seniority was 13 years, and the average number of partners was two. The main types of retail trade are footwear/clothing (28.6%), furniture/decoration (14.3%), and building materials (11.9%). The years engaging in networks ranged from zero to 20, the average was eight years.

The variables gender, age, educational background, and years participating in the network were tested as control variables to evaluate whether they impact the motivation to engage in networks or not. None of the variables had any effect on the factors that motivate the engagement in networks. Thus, it is possible to affirm that the relationship between causation and effectuation is not affected by the control variables included in the study.

After the accomplishment of the descriptive analysis, we carried out the factor analysis by using the principal components analysis technique (for both items, causation and effectuation) based on the structure presented in Figure 2. In the factor analysis of the causation variables, only one factor that explained 63.2% of the variance was validated; all seven items presented factor loadings higher than 0.7 indicating a unidimensional construct (Hair, Black, Babin, Anderson, & Tathan, 2009). In the factor analysis of the construct effectuation, we used the oblimin rotation, which allows the existence of correlated factors among themselves (Hair et al., 2009). Thus, we validated three factors – all with loadings higher than 0.5; the first factor comprised experimentation items, the second affordable loss, and the third two items related to flexibility and two other items related to pre-commitments. Therefore, the effectuation scale can be considered multidimensional and is characterized by three dimensions correlated among themselves.

Assuming that causation and effectuation are mutually exclusive, i.e., that it is impossible for them to exist or happen together, would imply a negative correlation amongst indicators. However, after verifying the correlation among all indicators, we identified positive correlations among causation indicators and in two effectuation dimensions, which indicates that both approaches are not

mutually exclusive. Subsequently, we computed the means of each of the three effectuation factors, as well as the single causation factor. The means were used to categorize respondents as high causation or low causation, and high effectuation or low effectuation. The values above the mean characterize high causation and effectuation effects, and values below the mean characterize low causation and effectuation effects.

After such categorization, the analysis of variance ANOVA was carried out in order to verify the effect of the dichotomous categories – causation and effectuation – on the factors that motivate the engagement in networks.

Analysis and discussion

The initial data exploration and the factor tests – regarding the measurement scale of causation and effectuation approaches – indicated the grouping of several variables pertaining to the causation construct into one single factor, as predicted by theory (Chandler *et al.* 2011). However, in the dataset analyzed herein (Table 1), the construct effectuation generated three out of four dimensions indicated in literature, thus flexibility and pre-commitments were grouped into one factor. Based on the means of causation and effectuation factors, we identified four different approaches: (1) low causation and low effectuation; (2) low causation and high effectuation; (3) high causation and high effectuation; and (4) high causation and high effectuation.

Factors that motivate the engagement in networks according to causal and effectual approaches

The aim of the subsequent analyses is to verify if factors that motivate the engagement in networks present variations associated with causation and effectuation actions. Table 1 presents the effects of the categories effectuation and causation regarding the motivating factors in aggregated form based on the means of the factors and considering joint effects for entrepreneurs and companies.

Table 1 - Causation and Effectuation: Factors that motivate the engagement in networks

Causation and Effectuation	Mean				Value (Z)	Sig.
	Low causation and low effectuation	Low causation and high effectuation	High causation and low effectuation	High causation and high effectuation		
Mean of the factors for entrepreneurs	2.18	3.31	3.19	3.48	2.832	0.051
Mean of the factors for companies	1.72	2.75	2.97	3.24	4.418	0.009

Source: Research data.

Between the categories (1) low causation and low effectuation and (4) high causation and high effectuation there is a significant difference in the perception of factors that motivate the engagement in networks. The entrepreneurs with high causation and high effectuation actions presented a greater

mean than the entrepreneurs with low causation and low effectuation approach. There is a statistical significance in the difference between these means; in other words, entrepreneurs simultaneously guided by causal and effectual logic are the ones that present greater motivation to engage in networks not only considering the benefits for themselves, but for the company. The data in Table 1 indicate that the factors associated with the evaluation of benefits for entrepreneurs are statistically significant ($p = 0.051$). Table 2 indicates details on the factors that motivated the engagement in networks considering the benefits expected for entrepreneurs and companies.

Table 2 - Causation and Effectuation: Factors that motivate the engagement in networks considering benefits for entrepreneurs and for the companies

Causation and Effectuation	Mean				Value (Z)	Sig.
	Low causation and low effectuation	Low causation and high effectuation	High causation and low effectuation	High causation and high effectuation		
<u>Factors that benefit entrepreneurs:</u>						
Reduced fear of failure	1.89	3.50	2.80	3.22	2.548	0.071
Improved self-confidence	2.11	3.50	3.00	3.47	2.744	0.057
Gaining respect as entrepreneur	2.11	3.25	3.10	3.56	3.054	0.040
Extended business vision	2.44	3.50	3.33	3.89	2.704	0.059
Extended ties and cooperation in the network	1.44	2.50	2.60	3.33	4.967	0.005
Mean of the factors	2.18	3.31	3.19	3.48	2.832	0.051
<u>Factors that benefit companies:</u>						
Improvement to product positioning	2.00	3.50	3.30	3.28	2.576	0.068
Extended product mix	1.67	2.50	3.20	3.39	3.953	0.015
Increased business visibility	1.89	3.75	3.20	3.56	4.000	0.015
Improvement to personnel qualification	2.22	2.25	3.10	3.94	4.727	0.007
Innovation in sales processes	1.89	2.75	3.00	3.68	4.752	0.007
Innovation in distribution processes	1.44	1.00	3.20	2.94	4.861	0.006
Improved financial results	1.89	3.25	3.20	3.37	2.685	0.060
Revenue increase	1.67	3.00	3.20	3.33	3.856	0.017
Increase in the number of employees	1.22	2.25	2.40	3.17	5.329	0.004
Increased customer base	1.44	3.25	3.20	3.50	5.602	0.003
Mean of the factors	1.72	2.75	2.97	3.24	4.418	0.009

Source: Research data

We highlight some statistically significant factors that motivate the engagement in networks concerning to benefit entrepreneurs in the following order: extended ties and cooperation in the network, gaining respect as entrepreneur, improved self-confidence, extended business vision, and reduced fear of failure. Causation and effectuation approaches do not present a significant relationship with the following factors: improved self-knowledge, improved communication skills, extended relationships and contacts, establishment of new partnerships, increased technical knowledge through the access to information and resources, increased market knowledge, improved planning skills, and identification of new business opportunities.

Regarding the motivating factors for the engagement in networks associated with the perception of benefits for companies, they were all highly significant both in the statistical mean and

individually. The factors that presented a statistically significance on the causation-effectuation approach were improvement to product positioning, extended product mix, increased business visibility, improvement to personnel qualifications, innovation in sales, innovation in distribution, improved financial results, revenue increase, increase in the number of employees, and increased customer base. Thus, regarding the participation in networks resulting from the assessment of benefits for companies, only three factors were not considered statistically significant, namely expansion of consumer market, opening of new branches/companies, and access to finance.

Subsequently, we carried out tests separately for each of the approaches. For the causation approach, the mean of the variables was initially calculated in order to group them into two different categories/classifications: (1) low causation and (2) high causation. After that, descriptive calculations and ANOVA were performed to identify the effects on the factors that motivate the participation in networks both in relation to benefits for entrepreneurs as for companies.

We tested each factor separately and the means of the factors, according to the data presented in Table 3, where only factors of statistical significance were included.

Table 3 - Causation: Factors that motivate the engagement in networks.

Causation	Mean		Value (Z)	Sig.
	Low causation	High causation		
Mean of the factors for entrepreneurs	2.53	3.38	5.051	0.030
Mean of the factors for companies	2.04	3.15	9.853	0.003

Source: Research data.

In the causation approach, the mean of the factors that motivate the engagement in networks associated with benefits to entrepreneurs is significant (0.030); when considered separately, most factors also displayed statistical significance ranging from 0.026 (gaining respect as entrepreneur) and 0.003 (extended ties in the network) to 0.082 (improved communication skills), as shown in Table 4.

Table 4 - Causation: Factors that motivate the engagement in networks considering benefit

Causation	Mean		Value (Z)	Sig.
	Low causation	High causation		
<u>Factors that benefit entrepreneurs:</u>				
Improved self-knowledge	2.85	3.76	4.332	0.044
Improved communication skills	2.62	3.45	3.183	0.082
Improved self-confidence	2.54	3.32	3.461	0.070
Gaining respect as entrepreneur	2.46	3.39	5.371	0.026
Extended business vision	2.77	3.71	4.830	0.034
Extended cooperation ties in the network	1.77	3.07	9.759	0.003
Increased technical knowledge through the access to information and resources	2.46	3.34	3.601	0.065
Increased Market knowledge	2.46	3.37	3.378	0.074
Mean of the factors	2.53	3.38	5.051	0.030
<u>Factors that benefit companies:</u>				
Improvement to product positioning	2.46	3.29	3.621	0.064
Extended product mix	1.92	3.32	10.742	0.002
Increased business visibility	2.46	3.43	4.755	0.035
Improvement to personnel qualification	2.23	3.64	11.005	0.002
Innovation in sales	2.15	3.45	10.220	0.003
Innovation in distribution	1.36	3.04	14.725	0.000
Improved financial results	2.31	3.31	4.946	0.032
Revenue increase	2.08	3.29	8.077	0.007
Increase in the number of employees	1.54	2.89	10.602	0.002
Increased customer base	2.00	3.39	9.781	0.003
Mean of the factors	2.04	3.15	9.853	0.003

Source: Research data.

The factors that presented higher statistical significance associated with the causation approach were improved self-knowledge ($p = 0.044$), gaining respect as entrepreneur ($p = 0.026$), extended business vision ($p = 0.034$), and extended cooperation ties in the network ($p = 0.003$). Regarding the analysis of the factors that motivate the participation in networks considering benefits for companies, we could also observe statistical significance not only in the mean of the factors ($p = 0.003$), but also when considering the factors separately. The only factors with no statistical significance were expansion of consumer market, opening of new branches/companies, and access to finance.

The test for the effects of the causation approach on the means of the factors that motivate the engagement in networks, both from the perspective of benefits for entrepreneurs and companies, was statistically significant. Therefore, entrepreneurs with high causation thinking value more the benefits of participating in networks for themselves and for companies, which can be observed by the significant difference between low and high causation means.

Subsequently, the dimensions of the construct effectuation were analyzed one by one: experimentation, affordable loss, and flexibility/pre-commitments. The ANOVA procedure did not indicate statistical significance in the dimension experimentation; in other words, experimentation exerted no effects on the motivation to participate in networks. Additional tests were performed to verify the significance in the dimension affordable loss, whose results are presented in Table 5.

Table 5 - Effectuation – Affordable loss and motivation to the engagement in networks.

Effectuation – affordable loss	Mean		Value (Z)	Sig.
	Low affordable loss	High affordable loss		
Mean of the factors for entrepreneurs	2.45	2.91	3.296	0.077

Source: Research data.

In the acceptable loss dimension, the motivation to engage in networks is significant in relation to the perceived benefits for the entrepreneur. However, the perception of benefits for companies were not significant. The detailed information on the factors of such dimension is presented in Table 6.

Table 6 - Effectuation – Affordable loss: Factors that motivate the engagement in networks.

Effectuation – affordable loss	Mean		Value (Z)	Sig.
	Low affordable loss	High affordable loss		
<u>Factors that benefit entrepreneurs:</u>				
Improved self-knowledge	2.80	3.69	3.406	0.072
Improved planning skills	2.50	3.42	3.114	0.085
Improved self-confidence	2.33	3.28	4.071	0.051
Gaining respect as entrepreneur	2.50	3.29	3.128	0.085
Extended business vision	2.56	3.66	5.232	0.028
Extended relationships and contacts	2.50	3.34	3.204	0.081
Mean of the factors	2.45	2.91	3.296	0.077

Source: Research data.

In the affordable loss dimension, the main factors that motivate the engagement in networks were improved self-knowledge, extended relationships and contacts, improved self-confidence, gaining respect as entrepreneur, extended business vision, and improved planning skills. Table 7 indicates only the significant effects that motivate the engagement in networks in the dimension flexibility/pre-commitments.

Table 7 - Effectuation – Flexibility/Pre-commitments and motivation to the engagement in networks.

Effectuation – flexibility/pre-commitments	Mean		Value (Z)	Sig.
	Low flexibility/pre-commitment	High flexibility/pre-commitment		
Mean of the factors for entrepreneurs	2.74	3.28	1.929	0.173
Mean of the factors for companies	2.22	3.06	5.163	0.029

Source: Research data.

Despite the significant effect of the factors gaining respect as entrepreneur ($p = 0.026$) and extended cooperation ties in the network ($p = 0.017$) shown in Table 4, the mean of the factors that motivate the participation in networks in the dimension flexibility/pre-commitments considering the benefits for entrepreneurs was not significant ($p = 0.173$), as demonstrated in Table 7.

However, when considering the mean of the factors in relation to benefits for companies and entrepreneurs, some factors presented statistical significance, as according to Table 8. Thus, the

dimension flexibility/pre-commitments in the effectuation approach presents a few effects on the factors that may provide benefits for companies: extended product mix, increased business visibility, improvement to personnel qualification, innovation in sales, improved financial results, revenue increase, increase in the number of employees, and increased customer base. Regarding the motivation to participate in networks considering personal benefits, only the factors gaining respect as entrepreneurs and extended cooperation ties in the network were statistically significant.

Table 8 - Effectuation - Flexibility/Pre-commitments: Factors that motivate the engagement in networks.

Effectuation – flexibility/pre-commitments	Mean		Value (Z)	Sig.
	Low flexibility/pre-commitment	High flexibility/pre-commitment		
<u>Factors that benefit entrepreneurs:</u>				
Gaining respect as entrepreneur	2.46	3.39	5.371	0.026
Extended cooperation ties in the network	1.92	3.00	6.185	0.017
Mean of the factors	2.74	3.28	1.929	0.173
<u>Factors that benefit companies:</u>				
Extended product mix	2.23	3.18	4.295	0.045
Increased business visibility	2.38	3.46	6.112	0.018
Improvement to personnel qualification	2.54	3.50	4.432	0.042
Innovation in sales	2.38	3.34	5.044	0.030
Improved financial results	2.46	3.24	2.853	0.099
Revenue increase	2.31	3.18	3.813	0.058
Increase in the number of employees	1.69	2.82	6.804	0.013
Increased customer base	2.08	3.36	7.953	0.008
Mean of the factors	2.22	3.06	5.163	0.029

Source: Research data.

After performing the tests in each dimension separately, we tested the set of items of the construct effectual simultaneously. The results are summarized in Table 9, which comprise only statistically significant factors.

Table 9 - Effectuation: Mean of the factors that motivate the engagement in networks.

Effectuation	Mean		Value (Z)	Sig.
	Low effectuation	High effectuation		
Mean of the factors (entrepreneurs)	2.71	3.45	4.305	0.044
Mean of the factors (companies)	2.38	3.16	5.061	0.030

Source: Research data.

When considering the construct effectual in the set of dimensions and items that compose it, it is possible to verify the significance of the mean of factors that motivate the participation in networks, both regarding benefits for entrepreneurs (0.044) as for companies (0.030). In other words, in accordance with data presented in Table 10, entrepreneurs who presented a high effectuation mean had a greater perception of the effects that motivated their participation in networks.

Table 10 - Effectuation: Factors that motivated the engagement in networks.

Effectuation	Mean		Value (Z)	Sig.
	Low effectuation	High effectuation		
<u>Factors that benefit entrepreneurs:</u>				
Reduced fear of failure	2.37	3.27	5.019	0.031
Improved self-confidence	2.56	3.48	5.762	0.021
Gaining respect as entrepreneur	2.63	3.50	5.362	0.026
Extended business vision	2.89	3.83	5.483	0.024
Establishment of new partnerships	2.26	3.18	4.360	0.043
Extended ties and cooperation in the network	2.05	3.18	8.148	0.007
Mean of the factors	2.71	3.45	4.305	0.044
<u>Factors that benefit companies:</u>				
Extended product mix	2.47	3.23	3.027	0.090
Increased business visibility	2.58	3.59	6.174	0.017
Improvement to personnel qualification	2.68	3.64	5.063	0.030
Innovation in sales	2.47	3.52	7.317	0.010
Improved financial results	2.58	3.35	3.244	0.079
Revenue increase	2.47	3.27	3.674	0.063
Increase in the number of employees	1.84	3.00	8.526	0.006
Increased customer base	2.37	3.45	6.349	0.016
Access to finance	1.79	2.67	3.479	0.070
Mean of the factors	2.38	3.16	5.061	0.030

Source: Research data.

Thus, the evaluation of benefits for entrepreneurs and for companies influences entrepreneurs to engage in networks in both approaches: high causation and high effectuation. Only the dimensions experimentation in the effectuation approach was not statistically significant.

Discussion

Initially, the findings of our study do not distinguish groups of entrepreneurs oriented either by causal or effectual logic. Nevertheless, causal and effectual factors were grouped. Such outcome is in line with the research of Faia et al. (2014) regarding causal and effectual approach, when evaluated by the scale of Chandler et al. (2011) as not mutually exclusive. The measurement of effectuation in this study grouped three factors instead of four; flexibility and pre-commitments were grouped into one single set. In the research performed by Faia et al. (2014), the dimensions experimentation and flexibility were excluded from the analysis. Our findings indicate that entrepreneurs presented both types of approaches simultaneously (causal and effectual), but in different degrees (high and low). According to the results, the highest mean was attributed to the relevance of engaging in networks, which presented high causal and high effectual logic. In other words, entrepreneurs highly oriented towards desired purposes (causation) and who seek to predict the future and those who highly evaluate the means they have to produce combinations (effectuation) and build the desired future (Sarasvathy, 2008) consider important the participation in networks due to possible benefits they may gain for

themselves and/or for the company. Such outcome strengthens the premise that entrepreneurs value relationships and contacts with several other actors (Granovetter, 1985; Steyaert & Landström, 2011). On the other hand, the outcomes also confirm that the immersion in networks is not the variable that distinguishes causal from effectual logic.

It was not possible to find significant differences exerted by control variables. Considering that no control variable exerted significant effects on the dependent variables, we can affirm that the effects on the perception of factors that motivate the engagement in networks are exclusively associated with the different actions from causal and effectual approach, and not with variables such as gender, age, educational background, or period of time engaging in a network.

When analyzed separately, entrepreneurs presenting high means in effectuation are the ones that present greater perception of the factors that motivate the engagement in networks. It confirms the importance of the relational dimension for effectual approach, as pointed out by Sarasvathy (2008) and Read and Sarasvathy (2005). However, entrepreneurs with high causation thinking also attributed greater importance to the factors that motivate the participation in networks than those with low causation thinking, which indicates that the participation in networks is also considered important in the causation approach.

The results indicate that the greater the predominance of the causal or effectual action style, the greater the importance attributed to the motivating factors for participation in networks, considering benefits for entrepreneurs and companies. Nevertheless, not every factor was influenced by effectual or causal actions. In this sense, only the following factors are associated with the engagement of entrepreneurs (with high causal or effectual approach) in networks who consider the benefits for themselves: extended cooperation ties in the network, gaining respect as entrepreneur, improved self-confidence, extended business vision, and reduced fear of failure. These factors have been previously mentioned by other authors as effects favorable to the engagement of entrepreneurs in networks, without however distinguishing effectual from causal logic (Downing, 2005; Machado & Jesus, 2010; Perotti et al. 2017; Wharton & Brunetto, 2007). Thus, the following factors were not considered motivators for the participation in networks either from a causal or effectual perspective: improved self-knowledge, improved communication skills, extended relationships and contacts, establishment of new partnerships, increased technical knowledge through the access to information and resources, increased market knowledge, improved planning skills, and identification of new business opportunities. In this sense, the motivators for the immersion in networks associated with the assessment of personal benefits are more closely related to psychological and subjective factors than to the perception of the ability of identifying and exploring opportunities, as mentioned in prior research (Vaghely & Julien, 2010).

As for the factors associated with the engagement in networks considering possible benefits for companies in both approaches (high causal and affectual), the following items were highly significant: improvement to product positioning, extended product mix, increased business visibility,

improvement to personnel qualification, innovation in sales, innovation in distribution, improved financial results, revenue increase, increase in the number of employees, and increased customer base (Balestrin & Vargas, 2004; Balestrin & Verschoore, 2010; Rocha et al. 2013; Munõz-Exposito & Sánchez-Franco, 2016). Only three factors were not statistically significant, namely expansion of consumer market, opening new branches/companies, and access to finance. Thus, entrepreneurs are more motivated to engage in networks due to possible benefits for the companies than for themselves.

For the two groups of entrepreneurs who participated in the research – (a) low causal logic and low effectual logic and (b) high causal logic and high effectual logic – the engagement in networks was considered significant in accordance with the following motivators for companies: improved product positioning, extended product mix, increased business visibility, improvement to personnel qualification, innovation in distribution, improved financial results, revenue increase, increase in the number of employees, and increased customer base. These outcomes corroborate the findings from previous studies about benefits from the participation in networks for companies in general (Balestrin & Vargas, 2004; Balestrin & Verschoore, 2010; Bergh et al. 2011; Claro & Laban, 2011; Machado & Jesus, 2010; Moore & Buttner, 1997; Munõz-Exposito & Sánchez-Franco, 2016; Pirotti *et al.*, 2017). Still considering both groups, the following factors were also significant considering the evaluation of personal benefits: extended cooperation ties, gaining respect as entrepreneurs, improved self-confidence, extended business vision, and reduced fear of failure. These results are also in line with previous studies on benefits for entrepreneurs engaged in networks (Downing, 2005; Machado & Jesus, 2010; Pirotti *et al.*, 2017).

In both groups, only a few factors associated with the evaluation of benefits for companies were not significant, namely: expansion of consumer market, opening new branches, and access to finance. These findings differ from those found by Hoffmann *et al.* (2008) and Monticelli *et al.* (2017). Regarding the access to finance, the outcome presented herein may be associated with the fact that the entrepreneurs surveyed operate in the retail market and have the possibility to obtain financial services from different sources, such as suppliers. Regarding the motivation associated with the perception of benefits for entrepreneurs, the following factors were not considered significant: improved self-knowledge, improved communication skills, extended relationships and contacts, establishment of new partnerships, increased technical knowledge, increased market knowledge, increased planning skills, and identification of new business opportunities. Thus, entrepreneurs with higher or lower causal and effectual logic, considering the number of factors, attributed more importance to the participation in networks to obtain benefits for their companies than for themselves, which strengthens the influence of social action on economic structures (Granovetter, 1985, 2007).

Finally, when analyzing causal and effectual factors separately, the significance attributed to the engagement in networks considering benefits for the entrepreneur in the causal approach were improved self-knowledge, gaining respect as entrepreneur, expanded business vision, and extended cooperation ties. Considering the same approach, the following factors associated with the perception

of benefits for companies were not significant: expansion of consumer market, opening of new branches, and access to finance. In the effectual approach, only the dimensions affordable loss and flexibility/pre-commitments are statistically significant. In the dimension affordable loss, we did not identify statistical significance in the variables comprising benefits for companies. In the flexibility/pre-commitments, the perception of benefits for entrepreneurs was not significant. The significant motivating factors associated with the perception of benefits for entrepreneurs in the dimension affordable loss were improved self-knowledge, extended relationships and contacts, improved self-confidence, gaining respect as entrepreneur, extended business vision, and improved planning skills. Regarding the benefits at the company level in the dimension flexibility and pre-commitments, the following factors were considered significant: extended product mix, increased business visibility, improvement to personnel qualification, increase in the number of employees, and increased customer base. These findings suggest that the dimensions of the effectuation measurement are not consolidated as a grouped assessment of the effectual thinking regarding the motivation to engage in networks considering benefits for entrepreneurs or for the business.

Thus, when comparing separately the significant effects in both approaches of the perception of benefits for individuals, only the following factors were identified in both groups: improved self-knowledge, gaining respect as entrepreneur, and extended business vision. When cross-checking these findings against the joint results (low and high causal or effectual thinking), only the factor gaining respect as entrepreneur had a significant effect on the engagement in networks.

Final considerations

The findings of this research show that entrepreneurs consider that social immersion can produce effects not only for themselves, but for companies. The greater the intensity of causal or effectual logic, the greater the motivation for entrepreneurs to engage in networks, especially when they assess the benefits for their companies.

The research indicates that the type of entrepreneurial action, oriented either by a causal or effectual logic (Sarasvathy, 2008), can influence the evaluation of factors that motivate the engagement in networks considering the evaluation of benefits for companies and entrepreneurs. In this sense, entrepreneurs guided by greater effectual thinking attributed greater importance to the effects stemming from the engagement in networks. Likewise, entrepreneurs guided by greater causal thinking also considered the effects of engagement in networks to be more important than those with less causal thinking. In other words, it is not the difference between causal or effectual thinking that distinguishes the importance attributed to the engagement in networks, but the intensity of these approaches.

Regarding the motivation to engage in networks considering the effects on the entrepreneur (in both approaches – causal and effectual), greater importance was attributed to gaining respect as

entrepreneur. It shows that visibility and legitimacy are important motivations that lead entrepreneurs to engage in networks, in accordance with Pirotti *et al.* (2017).

In short, the research findings show that causal and effectual logic are not mutually exclusive but coexist in the entrepreneurial action. It is important to emphasize herein that the intensity of each of them was responsible for the differences found in the factors that motivate entrepreneurs to engage in networks. We also highlight that even in the groups with low causal and effectual thinking, entrepreneurs still indicated a few factors that motivate them to participate in networks, although with less intensity.

For the field of entrepreneurship studies, the findings show that the type of action – causal or effectual – can influence the engagement in networks. We present scientific contributions to the fields of networking and entrepreneurship by emphasizing possible differences among the factors that motivate the engagement in networks by entrepreneurs guided by causal and effectual thinking. More precisely in the field of entrepreneurship, this research contributes to studies of causation and effectuation as distinct logics from entrepreneurial thinking. Furthermore, the results can also be relevant for other types of entrepreneurs, e.g., technology-based, for which participation in networks is important to generate knowledge, learning, and innovation (Hoffman *et al.*, 2007; Massaini & Oliva, 2015; Sánchez *et al.*, 2017; Vaghely & Julien, 2010). Thus, future studies may investigate the factors that motivate the engagement in networks surveying entrepreneurs operating in different business segments.

As practical contribution, the results contribute to networks, emphasizing which factors motivate the engagement of entrepreneurs in networks. It contributes not only to the adhesion of new participants, but also to the retention of current members.

Amongst the limitations of our study, we highlight that we did not consider centrality measures in the network, as proposed by Miranda, Liboreiro and Borges (2017). Future work needs to be done to analyze the effects according to centrality in the network to identify possible effects on centrality associated with causal or effectual actions.

Note: The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the CAPES Foundation in Brazil (grant number 001).

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Appendix I

Questionnaire

1- Respondent's gender:

- Female
- Male

2- Age: _____ years old

3- Marital status:

- Single
- Married or domestic partnership
- Divorced
- Widow(er)

4- Educational background:

- Incomplete middle school
- Middle school diploma
- Incomplete high school
- High school diploma
- Incomplete higher education
- Diploma of higher education
- Graduation - MBA
- Master's degree
- Doctorate

5- At what age did you start with entrepreneurial activities? _____ years.

6- How long is the company active in the market? _____ year(s).

7- How many partners in your company? _____

8- How many employees in your company? _____

9- In which retail segment does your company operate?

- Bazaar and household items

- Car dealership
- Electronics, games, and accessories
- Pharmacy
- Footwear and clothing
- Building materials
- Furniture and decoration
- Gas station
- Watch industry
- Supermarket and foodstuffs
- Other(s) _____

10- How long have you been engaged in the network?

- I have been engaged in it for _____ year(s).
- I have already been engaged in a network, but not anymore.
- I have never been engaged in networks.

11- Which entrepreneurial networks do you know in Chapecó?

- Associação Comercial e Industrial de Chapecó - ACIC
- Câmara de Dirigentes Lojistas - CDL
- Sindicato do Comércio da Região de Chapecó - SICOM
- Other(s) _____

12- Answer the following questions on a scale of 1-5 where 5 indicates highly satisfied and 1 is highly dissatisfied

Regarding your entrepreneurial approach	Strongly disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly agree 5
I analyzed long-term opportunities and selected those that offered the best return.	0	0	0	0	0
I developed a strategy to efficiently use available resources and capabilities. disponíveis.	0	0	0	0	0
I developed and projected a business plan.	0	0	0	0	0
I organized and implemented control processes to ensure the achievement of pre-established objectives.	0	0	0	0	0

Regarding your entrepreneurial approach	Strongly disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly agree 5
I researched and selected target-markets and made a significant competitive analysis.	0	0	0	0	0
I had a clear and consistent vision of how far I would like to get.	0	0	0	0	0
I developed production and marketing actions plans.	0	0	0	0	0
I tried different products and different business models.	0	0	0	0	0
The product/service offered now is essentially the same that had been originally conceptualized.	0	0	0	0	0
The product/service offered how is substantially different from the one initially projected.	0	0	0	0	0
I tried several different methods until I found a business model that worked.	0	0	0	0	0
I was careful not to commit more resources than I was willing to lose.	0	0	0	0	0
I was careful not to risk more money than I was willing to lose with the initial idea.	0	0	0	0	0
I was careful not to risk much money, which would have put the company in financial distress if things had not worked out.	0	0	0	0	0
I allowed the business to develop emergent (new) opportunities in addition to what had been planned.	0	0	0	0	0
I adapted what we were going to do according to the resources I had available.	0	0	0	0	0
I was flexible and took advantage of opportunities as they arose.	0	0	0	0	0
I avoided actions that restricted business' flexibility and adaptability.	0	0	0	0	0
I made use of several agreements with clients, suppliers, and other organizations and individuals to reduce uncertainty.	0	0	0	0	0

Regarding your entrepreneurial approach	Strongly disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly agree 5
I made pre-commitments with clients and suppliers whenever possible.	0	0	0	0	0

13- Regarding the effects of participation in networks, answer the following questions on a scale of 1-5 where 5 indicates very important and 1 is not important

Effects	Not important 1	Slightly important 2	Moderately important 3	Important 4	Very important 5
It increased my self-knowledge	0	0	0	0	0
It improved my communication skills	0	0	0	0	0
It broadened relationships	0	0	0	0	0
It reduced my fear of failure	0	0	0	0	0
It improved my self-confidence	0	0	0	0	0
I gained more respect as an entrepreneur	0	0	0	0	0
I expanded my business vision	0	0	0	0	0
I established new partnerships	0	0	0	0	0
I extended entrepreneurial cooperation ties	0	0	0	0	0
I increased my technical knowledge	0	0	0	0	0
I increased market knowledge	0	0	0	0	0
It improved product positioning	0	0	0	0	0
I improved my planning skills	0	0	0	0	0
I identified new business opportunities	0	0	0	0	0
It expanded my consumer market	0	0	0	0	0
I opened new companies/branches	0	0	0	0	0
It expanded product mix	0	0	0	0	0
The company has now more visibility	0	0	0	0	0
It improved the qualification of my staff	0	0	0	0	0
It provided innovation in sales processes	0	0	0	0	0
It provided innovation in distribution processes	0	0	0	0	0
It improved the financial results of the company	0	0	0	0	0
It increased company's revenue	0	0	0	0	0
I increased the number of employees	0	0	0	0	0
I increased my customer base	0	0	0	0	0
I had access to finance	0	0	0	0	0
Other(s):	0	0	0	0	0