Examining Structural Flexibility Factors in SMEs: A Mixed Methods Study in Mexico

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Abstract: The purpose of this article is to demonstrate the utility of a mixed methods approach in the examination of one of the best-known success factors of small and medium-sized enterprises (SMEs): their structural flexibility (SF), and how this is related to their organisational life cycle (OLC). Previous research has proposed five factors to explain SF in large and medium-sized organisations. By adopting an explanatory sequential design, this study demonstrates why a mono-method approach is insufficient to explain this model when put into operation in SMEs. It also highlights a key aspect of mixed methods research: the integration challenge, which is illustrated with joint displays and using a weaving approach. In the first quantitative phase, data from 257 SMEs were collected, classified according to their OLC stage, and examined with exploratory factor analysis (EFA) and a two-step cluster analysis. The EFA revealed five factors, one of which, called "decision-making", presented unexpected statistical behaviour and an unclear explanation, indicating a contrasting approach was necessary for better results explanation. It was not until the qualitative phase that we realised this aspect would be better named "centralisation in decision-making". This term is associated with growing and declining SMEs, and it may constrain their flexibility and limit their growth. Additionally, a new theme emerged in this phase: "innovation", which had not been associated with the SF before. This paper provides evidence that the combined use of quantitative and qualitative approaches offers the possibility of exploring new dimensions and can lead to a more comprehensive understanding of the phenomenon in a way quantitative data alone may not allow.

Keywords: Mixed Methods integration, joint display, centralisation in decision-making, innovation, organisational life cycle, QUAN-qual research.

1. Introduction

In many countries, SMEs represent more than 97% of companies (Altman and Sabato, 2007) and are recognised for their contribution to the economy (OECD, 2017). Despite its importance, research on SMEs is little known in Latin America (Carrillo, 2007), while on the contrary in Europe and North America, there are research agencies that support prolific research (Bezzina et al., 2017). This is one reason that triggers SMEs of developing countries in applying business models of large companies from developed economies, although often this literature is inadequate due to their context (Baltar and Gentile, 2012). Additionally, SMEs´ failure rate in developing countries is higher compared to those of developed economies (Terziovski, 2010; Guzmán and Lussier, 2015). SMEs are affected by resource limitations, little environmental power and owner-centred organisations (Kelliher and Reinl, 2009). Therefore, SMEs need to be studied separately from large companies and require their own business models.

One advantage of SMEs over large companies is their SF that allows them to have a rapid response to environmental fluctuations (Nicholas, Ledwith and Perks, 2011; Centeno, Hart and Dinnie, 2013). That is why in the beginning, this research proposed studying the relation between SF and the lifecycle of the SMEs in a developing context, although this is not now the main objective, for the following reasons:

This research first attempted to explain the mentioned phenomenon using a unique quantitative method. Nevertheless, when results were analysed, they were unclear and could not be explained satisfactorily. Then we realised that the gap in our knowledge about SMEs' competitiveness might be due to a gap in the methodology. This is relevant because, since the 1990s, there has been some criticism of quantitative methods because they sometimes remove data and meanings from their context (Guba and Lincoln, 1994). In this sense, mixed methodology—research that combines qualitative and quantitative data collection and data analysis within a single study (Molina-Azorin and Cameron, 2010)—became an attractive method. It helps to unravel

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the complexity behind new enterprise conducts (Reilly and Jones, 2017) and explore the changing and evolving SME context (Carson and Cromie, 1990; Gummesson, 2005). Nevertheless, the case examples using this methodology remain underutilised (Brown, 2014).

This article aims to exemplify the benefits of applying mixed methodology by uncovering the particularities of SF of SMEs in Mexico, and unveil the trends not noticed when a mono-method is used (Bazeley, 2015). For this purpose, three research questions were established: 1) What are the factors that explain SF in SMEs? 2) In what way does the context of SMEs in a developing economy affect their SF? 3) To what extent do testimonials of owner/managers contribute to a more comprehensive understanding of SF, via an integrative mixed method analysis?

The rest of this article is divided into four sections: Firstly, a review of the literature on SMEs, SF and OLC is presented. Secondly, we explain the research process and the challenges of each stage. In the third section, the findings and integration of the mixed methods are presented. This paper concludes with implications for SME owner/managers and researchers.

2. Literature review

2.1 Structural flexibility

SF is the management's ability to adapt the way in which responsibility, power and working procedures are assigned to the organisation's members (Hao, Kasper and Muehlbacher, 2012). Castillo (2006) explained SF with five factors: 1) organisational design, 2) formalisation, 3) communication, 4) management team, and 5) decision-making. Organisational design refers to the firm's horizontal or vertical structure. To achieve SF, there must be greater horizontality because flatter structures allow for more open and direct communication and information flows better for timely decision-making (Castillo, 2006; Bamel et al., 2013). Formalisation reflects the emphasis on regulations to maximise control of business activities and minimise deviations (Adizes, 1989). Communication involves the exchange of organisational knowledge of different areas, it helps to identify problems and apply solutions (Bamel et al., 2013). The difficulty in centralising communication is that, although it enables to take robust decisions, it presents delay problems which are critical in dynamic environments (Castillo, 2006). In respect of the management team, companies with SF often have a heterogeneous group of people with different backgrounds (Castillo, 2006). The heterogeneous firm has cognitive diversity which helps to take risks and boost action capacity, while the homogeneous organisation reveals cognitive limitations restricting management's action capacity (Hatum and Pettigrew, 2004).

Organisational decision-making regulates the availability of resources in the firm (Krijnen, 1979) and it is necessary to increase preferential access to future opportunities (Kandemir and Acur, 2012). Decision-making processes become inflexible if the company lacks clear objectives or there are frequent conflicts among employees, or the company is facing a period of falling profits (Carrasco, Angeles and Marroquin-Tovar, 2016). Importantly, while research has developed theoretical decision-making models well suited for large companies (Baltar and Gentile, 2012), these models present application problems for SMEs (Kelliher and Reinl, 2009). For instance, owner/managers of SMEs are responsible for the decision-making process and the implementation of entrepreneurial, operational and leadership strategies (Salazar and Soto, 2009), they are pressured to be experts in all management fields (Kelliher and Reinl, 2009), In contrast, in large organisations these responsibilities might be split across different professional managers who are only accountable for the decision-making process of their area (Teece, 2016). In this sense, aligning all the organisation's decisions under one person can increase coordination problems (Harrigan and Newman, 1990) and reduce the organisational flexibility (Denrell, 2003). Therefore, it is imperative to investigate the decision-making context of SMEs.

In summary, organisations with greater SF tend to have a more heterogeneous management team where decision-making is decentralised; they have few hierarchical levels and formalisation, and more open and direct communication channels. Also, firms with less SF show steeper hierarchies, stricter regulations, and centralised communication and authority.

2.2 Organisational Life Cycle

Organisations have long been studied as living organisms (e.g. Adizes, 1989; Hanks et al., 1993; Tam and Gray, 2016). From this perspective, they fulfil a life cycle similar to that of human beings as they go through several

stages: birth, development, maturity, decline and death. These stages are defined as "the unique configuration of variables related to strategy, structure and organisational context" (Hanks et al., 1993 p. 7). Although there is no consensus about the number of stages, it has been revealed that organisations tend to operate within a definable state during a specific period (Levie and Lichtenstein, 2008), and there is a consistent pattern of development over time (Dodge, Fullerton and Robbins, 1994). Some studies show that SMEs follow an OLC (Moy and Luk, 2003; Masurel and Van Montfort, 2006).

In this research, the variables which identify the OLC stages are based on the model posed by Adizes (1989), since it is considered an outstanding model (Ivashkovskaya, Gushchin and Rukavishnikov, 2010). It shows not only the dilemmas of management but also the corporate culture and the organisational climate. This model includes variables as management style, organisational structure and strategy, plans and objectives, staffing and compensations. Taking into account the principle of parsimony, in this research, this model is summarised in three major stages: growth, maturity and decline.

Adizes (2004) shows that organisational ageing is caused by a decrease in flexibility and an increase in controllability, regardless of the firm's age or size. This suggests that SF flattens out the OLC curve and companies with more SF would tend to survive better than organisations without SF. In this sense, the maturity stage is identified as the optimal position in the OLC (Bull, Cromson and Jayawarna, 2008) since at that moment the organisation has a balance between flexibility and control (Adizes, 1989). This stage presents three main characteristics related to SF: 1) the company has an organisational structure where there are clear rules and responsibilities, 2) meetings and communication are orderly and productive, 3) team management is integrated by managers with different key roles (Adizes, 1996), which demonstrates that the management style is not autocratic. The organisation will stop developing a positive slope within its OLC if it loses this balance, and might fall into a "decline" stage, characterised by insufficient decentralisation, excessive formalisation, a hierarchical structure that promotes rigidity, and unclear communication (Adizes, 1996). Therefore, change capacity is lost, and the long-term consequence leads to the organisation's death. Figure 1 illustrates the theoretical model aiming to relate SF factors to the OLC stages in SMEs.

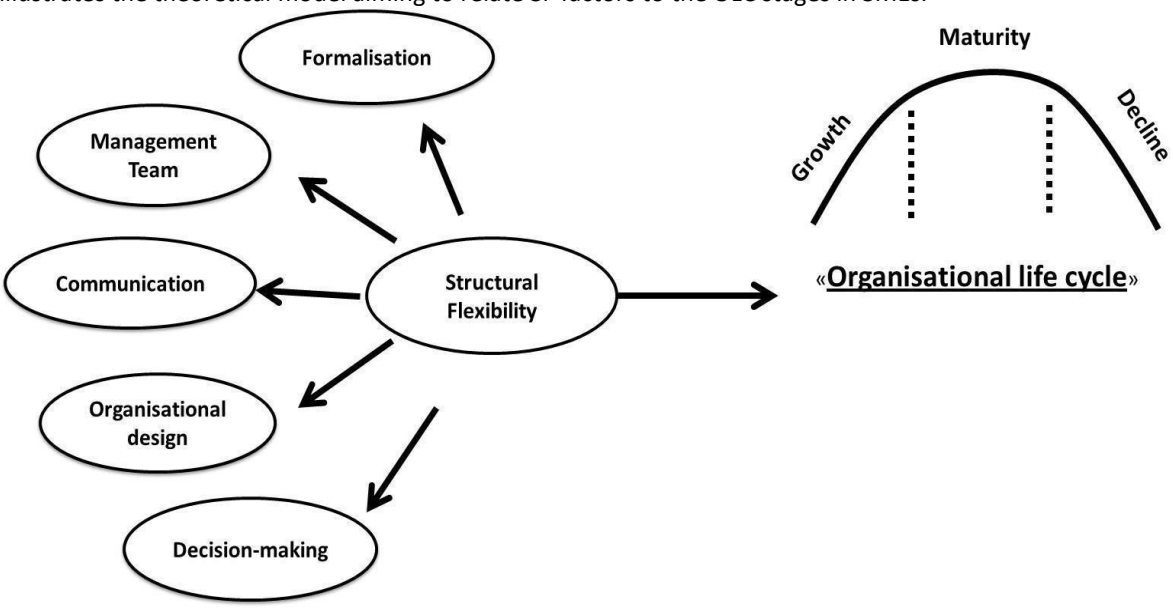


Figure 1: Theoretical model of structural flexibility and OLC

Source: Author's elaboration adapted from Adizes (1989) and Castillo (2006).

2.3 Mixed methods studies on SMEs

When making research design decisions for SME studies, it is essential to consider their nature, heterogeneity, and their continuous shifting (Ipinnaiye, Dineen and Lenihan, 2016). By establishing a sole quantitative approach, it is possible that the results would not recognise environmental characteristics, or the study may remain grounded in context without demonstrating generalisations when using a qualitative approach. Some authors have encouraged the use of a mixed methods approach to achieve a better understanding of the

phenomenon (Klassen et al., 2012) while addressing the main issues of SME research (Ho et al., 2016). This approach improves external validity and context transferability (Chong and Shafaghi, 2009), which allow researchers to improve the depth and breadth of results.

Despite the promising outcomes of mixed methodology, it has only recently obtained academic attention in SME research. For instance, in a review of 36 refereed SME articles, Durst and Runar Edvardsson (2012) found two studies using a mixed methods approach. Similarly, Massaro et al. (2016) reviewed 89 SME articles and found six studies with this approach. This dearth of mixed methods approach use is not exclusive to SMEs, but also in other managerial studies as found by Bazeley (2015) and Molina-Azorin and Cameron (2010). Moreover, existing mixed methods articles about SMEs present shortcomings, for instance, Nolan and Garavan (2016) found that SME studies in Human Resources often do not combine quantitative and qualitative data effectively. In a Web of Science database search of peer-reviewed articles related to SMEs in developing countries, during the last two years (2016-2018) using a mixed methods approach, we found 19 articles. We limited our search to this study's characteristics. We noted that most of these studies focus on managerial contributions, do not highlight the benefits of using mixed methods, and hardly include an explicit rationale statement for using this approach, which is relevant as "it indicates to the reader that the quantitative and qualitative methods and data were mixed intentionally and for defensible reasons" (Hanson et al., 2005, pp 232). We also found little evidence of mixed methods integration done through "meaningful exchange and reporting" as Bazeley (2015 p. 33) suggests. All this may be indicative that researchers in SMEs need to further familiarise themselves with integration strategies and the interdependence between approaches.

Overall, there is a lack of attention to the expansion of multiple perspectives in analysing SME topics such as SF. Currently, there is virtually no research on this topic using a mixed method approach from Latin America.

3. Method

The reasoning behind this study´s mixed methods approach was due to the unclear results and unsatisfactory explanations from the initial quantitative study, mainly surrounding decision-making characteristics. We realised that a mono-method approach led to a gap in knowledge. In following the quantitative study with a qualitative study and integrating both sets of findings, we expected to benefit from a more comprehensive theory of SF in SMEs in Mexico.

We conducted a sequential explanatory design with the diagram notation QUAN→qual (Morse, 1991) that implies first collecting and analysing quantitative and then qualitative data in two consecutive phases (see Figure 2). The design selection was driven by the purposes of development and complementarity (Hanson et al., 2005), the nature of the research questions, and the significant literature review and background information which facilitated its implementation (Wardale, Cameron and Jun, 2015).

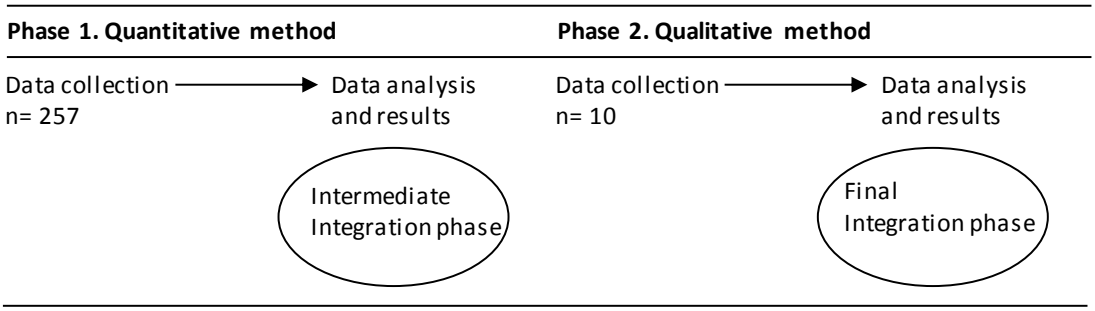


Figure 2: Explanatory sequential mixed method design

The procedure involved first an intermediate integration phase with methods becoming fully integrated once both sets of data were available. In the intermediate phase, analysis of the survey data of 257 SMEs helped in leading directly to ten individual interviews (Creswell and Plano Clark, 2007) to elucidate and provide more depth to the questionnaire responses. In the final phase, the findings of both quantitative and qualitative methods were integrated into one through a weaving approach. They are presented theme-by-theme (Fetters and Freshwater, 2015) in tables and joint displays, which facilitate the connection of the findings with the theoretical framework (Guetterman, Fetters and Creswell, 2015).

3.1 Quantitative phase

Participants

SMEs were defined as enterprises with up to 250 workers. This criterion is similar to other studies based on the European Union's L124/36 recommendation (2003/361/CE) (Nunes, Serrasqueiro, and Leitão, 2012). The unit of analysis was SMEs of industry, commerce and service sectors operating in Mexico City, which according to the database of the Mexican Enterprise Information System (SIEM, 2014) has the largest number of such establishments in the country. Therefore, considering the number of SMEs registered in the urban region and due to the limited use of the internet (Amorós, Planellas and Batista-Foguet, 2007), we proposed to contact in person a target sample of 300 SMEs.

The requirements for the survey inclusion were: size, owner status (no subsidiaries), and being currently active. The sample is not confined to some particular type of business. However, due to resource constraints, SMEs were limited to those established in the south of the city, where mainly commerce and service companies are concentrated. Importantly, commerce and service represent 51% and 39%, respectively, of local companies with key contributions to the local and national GDPs (INEGI, 2008; INEGI, 2016). We approached them through personal contact and surveyed those willing to provide access to their business information. In this process, a team of assistants received prior training in the application of questionnaires and were responsible for obtaining appointments and visiting the firms for the delivery and collection of them. After receiving 300 responses, an exhaustive screening process was carried out, where those that did not meet quality criteria, (e.g. incomplete, inaccurate or beyond the scope), were discarded. Finally, we obtained 257 valid questionnaires. The technical characteristics of the sample are shown in Table 1.

Table 1: Technical characteristics of the sample

Reference period:	2014-2015
Target population:	SMEs in Mexico city
Sampling scope:	26,856 SMEs
Sample size:	257 final viable questionnaires.
Method of collecting information:	Personal contact with questionnaire.

The sample presents the following characteristics: service (50%), commerce (42%), and industry (8%) firms. In respect of their operating years, 58% had more than five years in the market, 16% were between two and five years, 18% were between one and two, and only 8% were less than one year.

Instrument

To measure the OLC stage, a questionnaire was designed based on the "*Adizes lifecycle assessment survey*" from the Adizes Institute, available on its website (http://adizes.com/lifecycle/). Several studies have utilised this survey to analyse the OLC in organisations including SMEs (e.g. Illes, Hurta and Dunay, 2015; Hernández, 2016; Danvila, Marroquin and Zegarra, 2018). The questionnaire used in this investigation is provided in Appendix 1.

The SF was measured with the scale used by Castillo (2006) which contains 23 five-point Likert-type questions. This instrument was previously applied to measure the SF in Colombian companies classified as medium and large enterprises. We chose this instrument, for two crucial similarities: medium companies as part of our sample and the Latin American context.

Analysis and results

Data processing was carried out using SPSS 24. An exploratory factor analysis (EFA) was conducted to identify the factor structure that underlies the observable variables. We used principal components as an extraction method of EFA to summarise the 23 research variables into fewer components. Finally we used varimax rotation to elucidate the data structure and facilitate the interpretation of the EFA results. KMO (Kaiser-Meyer-Olkin measure of sampling adequacy) (value= 0.878) and Bartlett´s test (df=252, p<.001) indicated the suitability of the data for structure detection. The EFA revealed the presence of five factors that make up the SF, as proposed by Castillo (2006) for medium to large companies. The sedimentation graph and the eigen-

values combined confirmed that these factors are sufficient to explain 55.6 % of total variance. The Cronbach Alpha of the SF scale as a whole was 0.87, which was considered acceptable (Tavakol and Dennick, 2011), and compared with the alpha obtained by Castillo (2006): 0.807. The factor names, number of items, explained variance, and reliability of each individual factor are presented in Table 2.

Four of the five factors present high-factor loadings (above 0.6) and can be interpreted clearly. However, the fifth factor behaves differently, since it only groups a single item. It was observed that this variable questioned whether the decision-making relied on a single person. We tried to disregard it, as Costello and Osborne (2005) suggest with freestanding items. However the results were no longer interpretable; neither the KMO measure nor the commonalities were improved, and the percentage of explained variance decreased. Therefore, we decided to keep it, given its explanatory force (4.6% of total variance) although, at this point, we could not interpret it and explain why this item may have been an isolated incident.

Table 2: Structural flexibility factors.

Factor name	Number of items	% of explained variance	Reliability
Formalisation	7	28.5	.80
Management team	7	11.7	.82
Communication	4	5.5	.71
Organisational design	4	5.3	.65
Decision-making	1	4.6	

To delineate groups of the sample firms, we additionally performed a two-step cluster analysis in SPSS 24, using the results of the EFA as a continuous variable and the OLC stages as a categorical variable. This procedure revealed three groups, described to help contextualise the rest of the results. (Full results of the cluster analysis will be the subject of further papers.) Table 3 then presents the mean values of the SF factors across the OLC stages for each cluster.

Cluster 1, n=129, presents positive mean values in formalisation and organisational design, negative values in decision-making and neutral values (barely above zero) in management team and communication. It was labelled “Mature firms”. In these organisations, the plans, policies, budgets and programmes tend to be formal and written. They have a horizontal organisational design with few hierarchical levels, and the decision-making does not rely on a single individual. The management team and communication neutral values do not contribute to the description of this cluster.

Cluster 2 n= 27, presents negative mean values in all the SF factors, except for organisational design and decision- making which present neutral mean values. It was labelled “Declining firms”. In these organisations the plans, policies, budgets and programmes do not tend to be formal and written. The organisation does not support the various visions of the teams and the variety of perspectives. Communication is slow and complicated. Organisational design and decision-making values do not contribute to the description of this cluster.

Cluster 3 n= 101 presents positive mean values in the management team, communication and decision-making factors, and negative mean values in the formalisation and organisational design factors. It was labelled “Growing firms”. In these organisations, the plans, policies, budgets and programmes do not tend to be formal and written. The organisation supports the various visions of the teams and the variety of perspectives. Communication is fast and fluid. The organisational design might have many hierarchical levels, although a single individual usually makes decisions based on a personal judgment.

Table 3: Mean values of the SF factors across the OLC stages.

	Cluster 1	Cluster 2	Cluster 3
SF factor /OLC stage	Maturity	Decline	Growth
		Mean values	
Formalisation	0.15	-0.18	-0.14
Management team	0.03	-0.65	0.14
Communication	0.04	-0.42	0.06
Organisational design	0.11	-0.01	-0.14
Decision-making	-0.15	0.03	0.18

3.2 Qualitative phase

Participants

After finishing the quantitative phase, we extended an invitation to ten owner/managers to participate in private sessions where we would present their own OLC questionnaire results. This selection was based on a purposeful sampling (Palinkas et al., 2015) of those participants representing firms in different OLC stages, who showed more interest in their results and willingness to benefit from their responses. The aim was to capture SF nuances, particularly those associated with decision-making, and a comprehensive understanding of the challenges SMEs face through their lifecycle. Table 4 shows the characteristics of the participants.

Table 4: Participants main characteristics

Business activity		**Foundation year**	**OLC stage**
1.	SME financial consultancy	2012	Growth
2.	Clothes factory	2005	Growth
3.	Energy engineering	1999	Growth
4.	Bakery shop	1987	Growth
5.	Transportation company	1968	Growth
6.	Insurance/financial advisory	2005	Maturity
7.	Camping activities firm	1987	Maturity
8.	Salad preparation and sales	2013	Maturity
9.	Stationery shop	n/a	Decline
10.	Water purification distribution	2011	Decline

Instrument

Data were collected through focused individual interviews (Flick, 2006). As posed by Merton and Kendall (1946), this type of interview was considered to be suitable for three reasons: the respondents were known to have been involved in a concrete situation, the elements and structure of this situation had previously been analysed by the researchers, and the interview was focused on subjective experiences of participants exposed to the pre-analysed situation. The objective was to maximise self-revelatory comments about the context of their decision-making practices.

Analysis and findings

The interviews were recorded and transcribed. The interpretation was completed with hand coding procedures, and qualitative content analysis was further developed. To transform expressed data into concepts, we began by open-coding each one of the interview sentences (Flick, 2006). This process helped to break down and understand the meanings behind the transcriptions.

At the start of each session, participants were first informed of the stage in which they were catalogued, as well as some characteristics of their cluster, and a brief description of the organisational problems associated with this stage (Adizes, 1996). We asked if they recognised this situation in their organisations and invited them to express themselves openly in this regard. We realised that respondents revealed some comments

emphasising different factors related to the stage of their enterprise. For instance, managers from mature firms highlighted communication and management team aspects, such as a favourable work environment, whereas the loss of trained personnel and lack of employee commitment were some of their concerns. Participants from declining firms complained about the monotony of their activities, but at the same time, they were proud of their time in the market. Owner/managers of growing companies expressed passionate comments about their product/service and forthcoming new projects while focusing on a decision-making theme as a limiting situation. Some of these expressions are shown in detail in this section and in the mixed methods findings section.

According to the literature review, it was expected that growing and mature firms showed more SF characteristics than declining ones. In this sense, having a heterogeneous management team is a sign of flexibility, but at the same time may imply greater challenges in "harness diverse talents" (Adizes, 1996, pp 27), which may explain the emphasis placed on this theme by mature firms. Conversely, growing firms seem not to have this problem as they are managed by a single individual. Nevertheless this generates other limited situations, such as the owner/manager's over-saturation. Unexpectedly, innovative ideas surfaced as the most positive theme in growing firms, quite the contrary to the declining ones, where lack of innovation was more of a concern than other inflexible factors (steeper hierarchies, insufficient regulation, or complicated communication). We also observed that in general, participants do not refer to the formalisation and organisational design themes specifically. It may be due to a cultural aspect, as evidenced by Pymes-Cumex (2010) which determined that in Mexico only 47% of small companies plan their business activities and even less (17%) have this planning process documented. Furthermore, most of the interviewed companies have fewer than ten employees, which could be another reason for the lack of emphasis on their organisational structure.

Regarding the decision-making theme, this phase added considerable new information to our study especially by participants of growing and declining SMEs. For example, they repeatedly expressed issues about the lack of delegation as a problem. As a participant pointed out:

> *"The delegation of responsibility is something very important. We cannot be any longer the orchestra-man in a company that is growing" (Clothes factory)*

They perceived centrality in decision-making not as a competitive advantage but as a limiting situation. Owner/managers themselves were aware of being over-saturated with operational tasks and not having sufficient time to devote to strategic management issues. They attributed this situation to a lack of personnel, as a manager explained:

> *"The owner is the only one who works on everything because we do not have enough people in the enterprise, this fact represents a great weakness, and we have seen it because we have reached a point where the company is stagnant. I think we have a big challenge." (Water-purifying company)*

In this phase, it was possible to examine more deeply the obstacles faced by growing SMEs in order to decentralise. One of these is the perception that hiring specialists is too costly and will be more expensive than the benefit it might bring.

> *"Our company as it grows often falls into confusion of roles; specialists are needed, but the company takes great care not to incur high fixed expenses ... sometimes I think that the latter aspect worries us more than necessary" (Clothes factory)*

Another obstacle that was mentioned is that some owner/managers do not realise that it is time to make changes and begin to decentralise, as the following participants expressed:

> *"As an SME, it is difficult to remain in a competitive market, to provide employment and maintain it. Seeing our failures or mistakes is very complicated many times from inside the company" (Energy engineering firm)*

> *"Workplace blindness to the CEOs happens to us every day, it is normal, it is natural, and when someone with an external position, fresh vision, even of young people arrives, then we have the opportunity to recharge our energy business" (Financial consulting firm)*

The analysis led to grouping codes into categories and they were labelled according to interviewees' expressions (Flick, 2006). One of these categories was identified as "the orchestra-man", which refers to the dependence of the decision-making process and oversaturation of the owner/managers, hindering their time dedicated to strategic and managerial issues. However, this theme no longer appeared relevant to managers of mature firms. We realised that in the latter, the manager and owner were usually different people. It is also related to what Adizes (1996) states: team management in mature firms is integrated by managers with different key roles, which can explain why centralisation was an issue in growing and declining firms but not in the mature ones.

This qualitative phase increased the scope and depth of the methodological proceedings. Especially, they helped us to develop a holistic picture of the fifth factor of SF. We renamed it "centralisation in decision-making", which reflects the isolated question in the EFA that refers to a single individual making decisions based on his judgment.

4. Mixed method findings

Like the basic principles of geometry which declare that multiple points of view allow for greater accuracy (Fetters and Freshwater, 2015) and based on the term "crystallisation" which maintains that the approach to the world has more than three sides (Richardson, 2000), this section integrates the quantitative results and qualitative findings. Mixed methods research must be supported by the integration of data and analyses before presenting the conclusion section (Bazeley, 2018a).

In the first phase, during quantitative analysis, we classified the organisations according to their OLC stage into growing, mature and declining companies. Through EFA analysis, we identified five factors that explain SF. Nevertheless, the decision-making factor did not manifest itself similarly to the other four, since it grouped only a single item, unrelated with any other, but with a similar explanatory force (4.6% of total variance) compared to the third and fourth factors (5.5% and 5.3%) respectively. The sequential explanatory design was considered to be especially useful because unexpected results arose from the first quantitative stage (Morse, 1991).

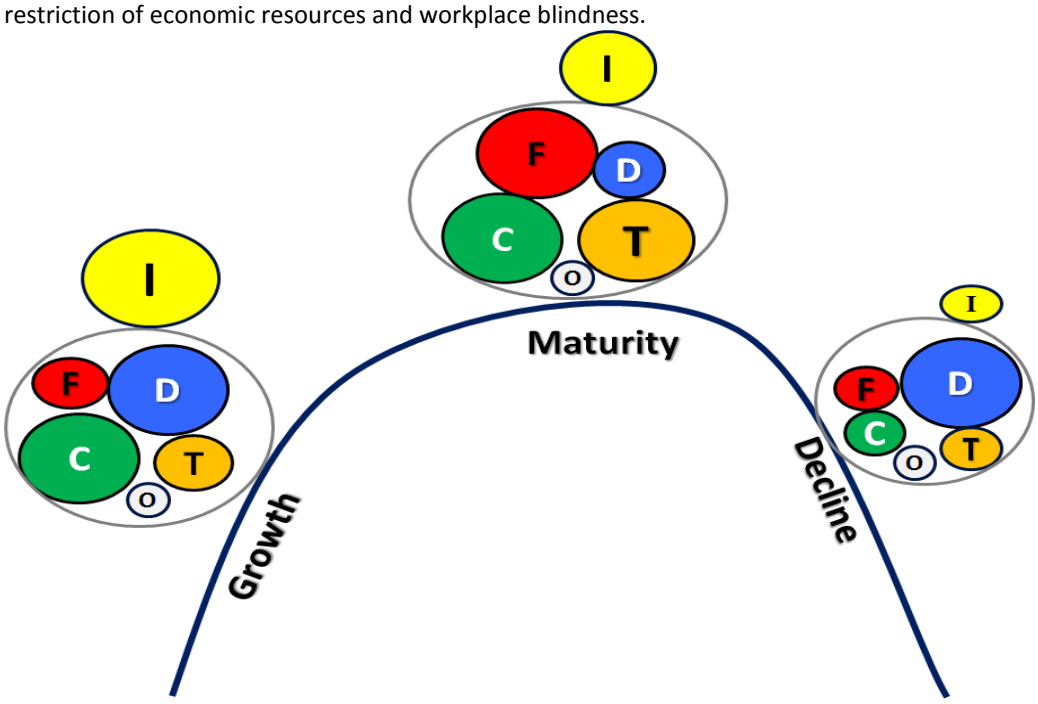
In the second qualitative phase, the "orchestra-man" theme was found to be a recurring one in growing and declining firms. This methodological insight contributed to the understanding that SMEs have different decision-making characteristics from those found in larger companies. SME owner/managers frequently have two-fold tasks: they are responsible for the decision-making process and the implementation of key strategies (Salazar and Soto, 2009); while in large organisations the decision-making process might be split across different members of the management team (Teece, 2016). Therefore, one of the main differences is the predisposition of decision-making centralisation by owner/managers of SMEs. This tendency was identified as a variable that affects SF and limits SME growth.

During the qualitative phase, a new theme emerged linked to the SF and OLC: "innovation". Through participant responses, innovation was found to have different nuances depending on the OLC stage. For instance, in growing firms, innovation is usually a very common activity, while it is more sporadic in mature firms. In declining SMEs, the cause of their stagnation was attributed to a lack of innovation. Table 5 presents a joint display that relates quotes extracted from the qualitative analysis with their corresponding OLC stage identified in the quantitative analysis.

Table 5: Quotes weaved through innovation in growing, mature and declining companies

OLC Stage	Supporting verbatim quotes
Growing companies High level of innovation. It is a dynamic and frequent activity.	*"The company has the vision to franchise the business model, and I believe we must work with young people and involve them in the company, that is fundamental for progress" (Financial consulting firm).*
Mature companies Medium level of innovation. They show concern about the lack of innovation in their strategies	*"It is very easy for companies to fall into a comfort zone, because of a lack of fresh ideas" (Camp activities firm).*
Declining companies Low level of innovation. They realised that a possible solution to their stagnation is to develop more innovation.	*"I think the key to a company is to innovate or to die; we need to update. Maybe we could buy new technology, faster printers, new programs to give better attention to our customers" (Stationery shop).*

A more detailed explanation came through as all quantitative results were compared with the qualitative findings. Bringing data together visually, the joint display shown in Figure 3 draws out new insights about the OLC model in relation to SF, giving particular attention to SMEs. This visual representation was deduced by integrating the results of the quantitative approach—which allowed to identify the SME OLC stages (the lifecycle assessment survey), the SF factors (EFA analysis) and the sizes of the factors present in each phase (cluster analysis)—with the findings of the qualitative phase (interviews) that allows the understanding of the following model nuances: innovation as a possible new factor, explanation of the centralisation in decision-making in SMEs, and the challenges faced in keeping their SF through their OLC, for instance, perceived restriction of economic resources and workplace blindness.



Notes:

F = Formalisation
T= Management Team
C = Communication
D= Centralisation in decision-making
O= Organisational design
I = Innovation

Figure 3: A joint display illustrating structural flexibility over the lifecycle of SMEs.

Source: Author´s elaboration

Figure 3 is explained as follows: The OLC model is divided into growth, maturity and declining stages. Each stage is composed of five SF factors—organisational design, formalisation, management team, communication and centralisation in decision-making. The size of the circles indicates the presence of SF factors in each one of the lifecycle stages, from which an increase or decrease is deduced. For instance, while formalisation and team management factors tend to increase from growth to maturity stage, centralisation in decision-making and innovation tend to decrease. Importantly, innovation was found to be a possible new factor, not found in prior SF studies of large firms. For this reason, it is displayed outside the compounded group of the five-factors. Some scholars have noted that the SME ability regarding innovation stems from flexibility and adaptability (Lin and Chen, 2007). However, further research is necessary to clarify the specific relationship between SF and innovation during the OLC, and determine whether it is a component or a consequence.

5. Conclusion

This study provides evidence to support the reasoning of development and complementarity in adopting a mixed methods approach in examining SF dimensions in SMEs. In respect to sequential development, the results of the quantitative method informed the qualitative method through an intermediate integration phase. We identified that five factors are required to explain SF in SMEs, using a quantitative phase. However, one factor, "decision-making", revealed unexpected statistical behaviour, and given only this approach no further understanding of this variable would be evident. By using the results of the quantitative study, the interview content was more insightful regarding the type of questions and data that would follow during the interviews with owner/managers. This phase was crucial to confirm the model, while questioning any other factors not raised during the quantitative study.

Regarding development, which suggests that one method helps to develop/expand into the results of the other (Hanson et al., 2005), the qualitative findings go deeper into the explanation of the decision-making factor. It was therefore possible to explain that centralisation is highly determined by a single person, especially in growing and declining SMEs, and that this contextual variable affects the SF due to the oversaturation of the owner/managers who might therefore constrain the SME growth.

In respect to complementarity, both quantitative and qualitative results were brought together in the fully integrated phase. In this study, through a weaving approach, the findings are presented by themes in tables and joint displays to aid understanding of the relationship between the findings and the conceptual framework. The integration of our mixed methodology contributes to the expansion of the SME literature by adding details to the relevance and change of each SF factor in different stages of the OLC model. In addition, results suggest the instrument by Castillo (2006) for measuring SF is needful of adaptation when referring to SMEs. We suggest augmenting items concerning the centralisation of decision-making and innovation.

This research has relevant implications for researchers and managers in two senses: 1) Theoretically, this study supports the view that mixed methods research contributes to theory development, especially in this case, when a context, field-based qualitative phase helped to gain a deeper understanding when quantitative data did not allow this. Researchers need to acknowledge that SMEs may need suitable models. Here, mixed methodology is an appropriate approach. 2) Practically, SME owners/managers must pay close attention to the dominant factors of SF when going through the OLC stages, with the purpose of achieving maturity and avoiding a premature decline.

This study has its limitations: in the qualitative phase, our sample of ten SME owner/managers makes no claims to the representation of all of them and further research may be required according to their economic sector. This study applied factor analysis to explore the factors of SF in SMEs. Nevertheless, other quantitative techniques may be additionally undertaken to confirm the emergent findings of the qualitative phase. As in any single economy study, a cultural variable might be at stake. Thus, it is recommended to extend this research to other developing and developed countries to compare and contrast our results.

We encourage future SME researchers to carry out mixed methods studies, as they provide a holistic perspective on the subject as opposed to using just one method. Future studies may seek to transcend the artificial binary division created between the quantitative and qualitative approaches since mixed methods are a continuation of the conversations between them (Bazeley, 2018b). In this sense, new and enhanced contributions may shed further light on the field.

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Appendix 1

OLC questionnaire

	Please, select the option that most reflects the situation of your company:
	In our organisation…
	C1. Long term personal success is achieved by: Avoiding risk, the less risks you take, the more successful you are Taking risk, the more risks you take, the more successful you are
	C2. Almost everything is: Permitted, unless expressly forbidden Forbidden, unless expressly permitted Generally clear about what is permitted and what is forbidden
	C3. In regards to our budgets and targets: Our results are difficult to predict We consistently beat our numbers It is a stretch to meet our targets, but we generally hit our numbers
	C4. Our focus is: More on function ('what' & 'why') than on form ('how' & 'who') More on form ('how' & 'who') than function ('what' & 'why') A balance between function and form
	C5. The real decision making power: Lies with line functions (e.g. marketing, sales or product development) Lies with corporate staff (e.g. finance, accounting or legal) Changes or lies with both depending on the situation
	C6. We focus more on: Future possibilities Past triumphs
	C7. The main focus seems to be on: Protecting our gains and profit margins Internal politics and personal survival Improving the return on investment or return on assets.
	C8. Our interest level to take risks in new markets, technologies or other frontiers is: A lot None Very little
	C9. When someone "make waves" or breaks important rules: The results they achieved by doing so are taken into account before they are reprimanded

Please, select the option that most reflects the situation of your company:
In our organisation…
People rarely break rules Can be a career limiting move, despite the results they might achieve
C10. "How" you do things is: Less important as "what" you do More important than "what" you do Just as important than "what" you do
C11. When implementing needed changes, we: Really struggle to make progress Are stuck and cannot make any significant changes Are slow
C12. We are currently striving to: Generate enough cash flow to fund our operations and get on a stronger financial footing Grow sales and gaining market share Attain higher profits
C13. Important decisions are made by: The owner/CEO It is unclear how important decisions get made The owner/CEO despite there being other competent people to make decisions
C14. Our main focus is to: Expanding into new markets and/or adding new products and services Build and strengthen our internal infrastructure to better support existing and future products and services Perfecting our existing products and services
C15. We have: Rules and policies in some areas, but not in others Rules and policies in place, but they are often not followed Very few rules or policies to govern behavior
C16. Job descriptions and organizational structure: Are not formalized and don't exist We have an organization chart and job descriptions, but they don't really reflect how things actually get done Exist and work well

