Passion and compassion represent dualities for growth

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Abstract

Purpose – The purpose of this paper is to enhance the understanding of the impact of passion and compassion on innovation and growth and, in this way, add to the current knowledge on organising growth in the context of networking small and medium-sized enterprises (SMEs).

Design/methodology/approach – The research was conducted in three networks with a sample of 55 separate SMEs. Through a quantitative study, the anticipated positive impact of passion and compassion on growth and on intermediate innovation issues were tested.

Findings – The analyses reveal no direct significant impacts of passion (own-profitability and interest) and compassion (other-profitability and interest) on growth. However, compassion had a very significant positive impact on manager ideas, which in turn had a positive impact on growth. Passion also had a positive impact, but this was proportionally much smaller. Moreover, the ability to organise the dualities of passion and compassion made a contribution to growth.

Research limitations/implications – The results of the research enhance the understanding of an integrative approach of passion and compassion to innovation in a network context.

Practical implications – Networking SMEs can use the findings to better understand and organise own actions to pursue growth. Policy bodies can use the findings to motivate SMEs to pursue growth.

Originality/value – The findings of this study enhance the theoretical understanding of passion and compassion and their integrated impact on growth. In firm networks, compassion and passion have a dual impact with compassion being most significant to enable innovation and growth. A contribution is hereby made to organise growth in firm networks.

Keywords Innovation, Growth, Compassion, Network, Passion, Organising

Paper type Research paper

1. Introduction

Networks are one of the ten most important dimensions of systemic innovation, as shown by Asheim and Coenen (2005). According to their research, the network approach at the regional level provides a platform for knowledge sharing between stakeholders because the possibility of utilising and combining explicit and tacit knowledge is present (Nonaka and Takeuchi, 1995). This research is conducted in food networks consisting of food-producing small and medium-sized enterprises (SMEs) that organise themselves into networks with the aim of fostering innovation and growth. When research examines very different operating firms, there is a growing consensus that an increase in turnover should be the preferred growth indicator (Weinzimmer *et al.*, 1998; Wiklund, 1998) because it is the most general growth measure. All commercial firms need to have turnover to survive, and firm turnover is, therefore, employed as a growth indicator in the SME context.

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Passion and compassion are distinct activities which are often viewed in leadership theory as basic dimensions that are contradictory to each other (Chemer, 2001; Blake and Mouton, 1964; Hersey and Blanchard, 1969), but create greater effectiveness when combined with leadership behaviour. In the SME network context, no clear leadership is typically present. This means that none of the single SMEs take the role of leading the network in traditional terms of command and control. They decide and run their joint activities in an equal community. Organising and innovation has to therefore be developed in another way. The aim of this paper is to shed light on the organising notion in the network context. This is achieved through the "organising" term in Weick's (1995) notion of process within organisations and the "innovation" term in Schumpeter's notion of radical innovation. In this paper, the notions of Weick and Schumpeter are integrated in a Danish network context with a relatively high level of social capital (Bjørnskov and Svendsen, 2002). The research question employed is thus: What impact does passion for task and compassion for employees have on growth in turnover among SMEs that participate in networks?

Weick's (1995) notion of organising is elaborated as an organisational process approach connecting the individual and team levels with the organisational level in the network context. Both the organisational and the individual levels are needed to enable innovation and growth. This study aims to shed light on the direct impacts of passion and compassion and the impact on the decomposed intermediate issue of innovation on growth. This study aims to make a contribution to the theoretical and empirical knowledge required for understanding the organisational approach to innovation and growth in networks.

Passion and compassion are understood in accordance with the elaboration of the themes of passion and compassion presented at the Academy of Management Meeting 2010 in session 843 on entrepreneurial passion. The manuscript has since been revised and extended. Here, the notion of passion was described as a personal, intense drive to obtain something. The individual acts upon and pursues personal goals. This accords with the description of Cuddy *et al.* (2008, p. 89) regarding "self-profitable traits" based on Vonk (1999, p. 835) as "behaviours and traits in the domain of self-profitability having primarily personal consequences". The notion of compassion was described as caring for others and the ability to empathise with the aims of other people over one's own personal aims. This accords with the term "other-profitable traits" based on Vonk (1999, p. 834) as "behaviours and traits have primarily interpersonal consequences".

This paper is organised as follows: first, a literature review elaborates on theory and is used to develop hypotheses for testing the significance of the effects of passion and compassion on growth. Next, the data collection method is presented, and the variables used are explained. The statistical path model is employed and elaborated through a stepwise backwards analysis of significance. It means that the least significant variables are taken off the model first. This continues until only the significant variables are left for discussion. Finally, the findings are analysed, discussed and summarised.

2. Literature review

The research in this paper is situated in a Danish context with a relatively high level of social capital (Bjørnskov and Svendsen, 2002). As noted by Bjørnskov and Svendsen (2002), based on insights from New Institutional Economics, the high level of social capital in Denmark and other Scandinavian countries can explain why Scandinavian

countries are doing so well in economic terms. As shown in Section 4 and the legend to Figure 1, the participants in this research experience higher growth in turnover than average Danish enterprises.

In economic terms, Denmark is doing well as shown in the latest IMD Competitiveness Yearbook (Lausanne, Switzerland, 2012), where Denmark is ranked 13th in overall competiveness on the national competitiveness list among the 59 countries analysed. The highest scores within the range of 1 (highest) to 55 (the lowest score based on the underlying parameters) are for Denmark Management Practices (3), Education (2), Social Framework (4), Technology Infrastructure (7), Institutional Framework (7) and Business Legislation (11). This reveals a society that values compassion and "other-profitability" by taking care of educational, social, health, institutional- and legal issues. These figures change slightly from year to year. In 2011, Denmark was ranked 12th in overall competiveness. Another source of information on Danish economic performance is the European Innovation Union Scoreboard (EIS) 2011. Denmark is ranked the second most innovative country overall and best on the underlying dimensions of "Linkages and Entrepreneurship" & "intellectual assets". The country profile (EIS, p. 28) describes above-average level of activity on "Innovative SMEs collaborating with others" and on "SMEs innovating in-house" and slightly above-average activity on SME-product, -process, -marketing and organisational innovations. Therefore, an enhanced insight on the impact of "SMEs collaborating with others" is of interest.

In this paper, innovation is employed in accordance with the definition noted by Amabile *et al.* (1996):

> […] the successful implementation of creative ideas within an organisation. In this view, creativity by individuals and teams is a starting point for innovation; the first is a necessary but not sufficient condition for the second. (Amabile *et al.*, 1996, pp. 1154-1155)

Here, Amabile *et al.* (1996) highlight new creative ideas and the ability to implement these new creative ideas by the organisations concerned. This refers to both the employment of the new idea in an organisational learning approach and the control of resources in a collective successful implementation. To view innovation as isolated, new creative ideas are insufficient.

Innovation was first elaborated by Schumpeter in Mark I (1934) and, later, in Mark II (Schumpeter, 1942). Schumpeter Mark I represents his research within the Austrian environment of many small entrepreneurs. Schumpeter Mark II represents his research

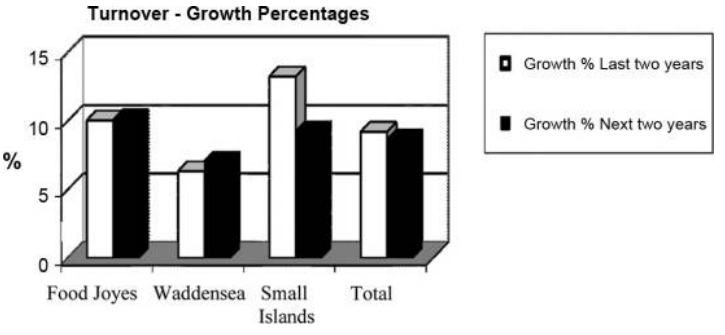

Figure 1.
Growth rates in the previous two years and anticipated growth for the next two years

within the US environment with larger enterprises innovating. Results are different depending on the environment; therefore, the two marks are often used for a more precise reference to the context of the research. Schumpeter perceived value creation as an important issue within innovation, which was noted first from the viewpoint of the entrepreneur (Mark I) and later at the system level within the organisation and society as a whole (Mark II). Weick's notion of "organising" enhances Schumpeter's notions through an integrated focus on innovation, thereby highlighting the gap between the individual/group level at which the new idea is created and the organisational/system level responsible for its successful implementation. In SMEs, the founder of the enterprise exerts a substantial influence on tasks, employees and, consequently, growth (Baum and Locke, 2004; Wiklund and Shephard, 2003). Thus, self-profitability and own interests are underpinned as having an impact on growth. However, as both Amabile *et al.* and Schumpeter Mark II underpinned, other-profitability through their interest in innovation is also necessary. Innovation is a collective process.

In the scholarly literature on networks, a distinction is made between social networks, as first discussed by Granovetter (1973), and innovation networks, as first presented by DeBression and Amesse (1991). This paper will focus on innovation in firm networks, and the elaboration of network theory will focus on networks of firms. Hage and Alter (1997) reveal how networks of firms differ from other types of networks and alliances. The four distinctions identified by Hage and Alter (1997) are briefly stated as follows:

(1) There is more complex coordination of tasks.

(2) A system of networks exists that spans industrial sectors.

(3) Firms may be involved in more than one network.

(4) Network memberships are more diverse and involve a variety of functions.

As a result of these distinctions, firm networks are essentially based on the existence of structural holes, according to the notion developed by Burt (2000). Based on the distinctions, firm networks are described as complex organisations that span many sectors, include numerous networks and serve a variety of functions. By definition, therefore, it is implied that firm networks are founded on weak ties across a host of firms or groups. Burt (2000) asserts that weaker connections among groups create competitive advantages and that these competitive advantages can span the structural holes. As Burt (2000) notes, the focus on own activities and the focus of people in other groups spanning the structural hole is important and beneficial. This spanning across the structural hole indicates the relevance of both passion ("self-profitable traits") and compassion ("other-profitable traits") to pursue both self-interest and the interests of others for the innovation and growth of all participating SMEs. Here, network theory supports the perception of a direct positive impact from passion and compassion on growth.

Providing more detail in an individual psychological theoretical context, the aim for achievement was first noted by Murray (1938) and elaborated by McLelland (1985) using the notions of the individual need for achievement and determination to win. Deci and Ryan (2000) elaborate on the need for achievement and note within the self-determination theory (SDT) that:

> The concept of needs, although once prevalent in empirical psychology, is now largely ignored in favour of the concept of goals. Our research shows, however, that a consideration of basic

> psychological needs provides a basis for predicting when the efficient pursuit and attainment of goals will be associated with more positive versus more negative performance. (Deci and Ryan, 2000, pp. 262-263)

The impact of the need for individual achievement on performance is perceived as important. Cuddy *et al.* (2008) revealed a significant distinction between self-profitable traits versus other profitable traits regarding needs; these authors defined and distinguished these traits as follows:

> *Self-profitable traits* – those that directly benefit or harm the trait processor, e.g. as intelligent or inefficient. *Other-profitable traits* – those that directly benefit or harm others in the trait processors social world, e.g. as trustworthy or hostile. (Cuddy *et al.*, 2008, p. 65)

Cuddy *et al.* (2008) reveal in their findings that balanced approaches using both self-profitable traits and other-profitable traits:

> […] elicit uniformly positive emotions and behaviour. (Cuddy *et al.*, 2008, p. 137)

The impact of both self-profitable traits and other-profitable traits are perceived as positive regarding individual and constructive intergroup behaviour. The terms "self-profitable traits" and "other-profitable traits" are psychological terms and are related in this paper to the behaviours of passion and compassion. The clear distinction between passion and compassion is highlighted by the direction of interest either as self-profitability and interest or as other-profitability and interest. Both are anticipated to have a positive impact on innovation and growth in turnover.

An aligned conception is revealed in the theoretical context of leadership with the ideas of self-profitability (passion) and other-profitability (compassion) present. Blake and Mouton (1964) have developed a notion of leadership illustrated as a leadership grid employing two dimensions of concern for the relevant task:

(1) concern for self, which represents the self-profitability and interest (self-profitability) of the manager; and

(2) concern for employees, which represents an interest for others (other-profitability and interest) in the firm/network.

In their findings, the best performance was revealed when both concerns were integrated. Their notion was inspired by McGregor's (1960/2006) theoretical concept regarding leaders X and Y, where leader X controls the behaviour of the employees and leader Y believes in self-motivated employees. Further developing this research, Hersey and Blanchard (1969) delineated two dimensions of leader behaviour, namely, task and relationship activities, in their concept of situational leadership.

Recently, however, leadership research regarding passion and compassion often stereotypes the dimensions of own-profitability and other-profitability (Chemers, 1997; Miner, 1993; Vecchio, 2002; Eagly and Carly, 2003) into gender considerations of leadership effectiveness. Other researchers, e.g. Powell (1990), however, claimed that gender has little to do to with leadership style and effectiveness. The SME networking context provides a platform for research where the complexity of firm networks requires an improved understanding of the impact of passion and compassion on innovation and growth in turnover. Lewis *et al.* (2002) highlight the need for a blend of emergent and planned approaches anticipating both self-profitability and interest (passion) and other-profitability and interest (compassion) to have a positive impact on innovation

and growth in turnover. This means that both SDT and leadership theory with some exceptions support the perception of a direct positive impact from passion and compassion on growth.

Based on the previous literature review, it is noted that innovation-, network-, SDT- and leadership theory from different perspectives support the hypotheses of a direct positive impact of passion and compassion on growth:

H1. Passion has a positive impact on growth.

H2. Compassion has a positive impact on growth.

An intermediate approach to the impact of passion and compassion on growth is offered by the consideration of innovation. SME networks aim for innovation; therefore, a deeper understanding and an explanation of growth can be provided by the perception of innovation as intermediating between passion and compassion on the one hand and the growth obtained on the other hand. In general, network research has revealed that network members employ network activities to exploit risk sharing, obtain access to new markets and technologies, speed products to market and pool complementary skills (Kogut, 1989; Kleinknecht and Reijnen, 1992; Hagedoorn, 1993; Mowery and Teece, 1993). As highlighted earlier, Powell *et al.* (1996), in a field of rapid technological development (biotechnology), revealed a *locus* of innovation within inter-organisational networks that evolve continually over time. SME networks then potentially represent many activities in a complex organisational form that is characterised by weak ties and opportunities for innovation and growth through cooperation and collaboration, which as earlier noted within the review of innovation theory, requires both self-profitability and interest and other-profitability and interest. New ideas are contained within innovation through individual and group creativity. Learning is contained within innovation through the implicit context of Kolb's (1984) concept of the four acts of observing, analysing, acting and reflecting, which are necessary for practice learning to occur. The control of resources in organisations is theoretically noted by Child (2005) based on Weber's (1947) ideas on control of resources. Child (2005, p. 113) has identified the following attributes for control: power, authority, expertise and rewards. Innovation then has to contain activities and measurement regarding ideas, learning and control for elaboration of the anticipated positive impacts from passion and compassion on innovation activities.

Based on innovation-, network-, learning and organisational control theories, the following hypotheses regarding the intermediating impacts of passion and compassion on innovation activities of new ideas, learning and control of resources can be summarised:

H3. Passion has a positive impact on implementing ideas, learning and resource control issues.

H4. Compassion has a positive impact on implementing ideas, learning and control issues.

Theoretically, growth has been discussed by many authors from various fields. Penrose (1959, p. 8), in her early argumentation regarding growth impacts within the entrepreneurial field, noted the importance of the continuous exploitation of new productive opportunities, which she perceives to drive the growth of firms. Davidsson

et al. (2010) noted the importance and necessity of having a resource-based advantage that allows firms to be profitable and form a sound basis for their growth. Again activities of new ideas, learning and the control of resources are emphasised through the resource-based view. Resources present in all three areas are perceived as important for both innovation and successful growth to be obtained.

Based on innovation theory and the resource-based view, the following hypotheses are noted regarding the immediate impact of innovation activities on growth:

H5. Implementing ideas has a positive impact on growth in turnover.

H6. Learning style has a positive impact on growth in turnover.

H7. Control issues have a positive impact on growth in turnover.

In summary, it can be stated that across psychological and leadership disciplines, a distinct anticipation of a positive impact from passion (self-profitability and interest) and compassion (other-profitability and interest) on growth in turnover is present. In addition, an intermediate relation through innovation is supported, with passion and compassion having positive impacts on the innovation issues of new ideas, learning and the control of resources, which again have a positive impact on growth in turnover.

3. Data collection method used for the three networks

An online questionnaire for three different food networks containing 93 SMEs was developed:

- *"Food Joys"*: 27 SMEs in the food industry in the southern part of Jutland in Denmark.
- *"Waddensea"*: 85 SMEs, of which 49 are food-producing SMEs located in southwest Jutland in Denmark.
- *"Small Islands"*: 17 SMEs within the food industry located on the smaller islands of Denmark.

Only the SMEs relating to food production and food service received the questionnaire, as the focus of the research is food-networking SMEs.

The questionnaire aimed to collect basic economic information and information regarding growth, organisational culture and innovation in the participating companies in the network. This paper deals only with data relating to the research question of how passion and compassion relate to growth in entrepreneurial networks. The respondents were SME owners.

Data were collected through an online questionnaire with fixed quantifiable responses combined with open comments for each question. Thus, the data were primarily quantitative but supplemented due to the opportunities provided to give qualitative comments. For the quantitative items, a seven-point Likert scale was used; this facilitated the respondents' answers. For validity and reliability, the questionnaire had to be accessible and comprehensible by all of the relevant respondents. This required pre-tests of the wording used and the online system used by the respondents when answering the questions. Valuable comments and suggestions were received from various test subjects and incorporated into the questionnaire before the final distribution of the questionnaire to all of the participants in the three networks.

The response rate during the data collection was satisfactory. In total, 60 SMEs (65 per cent) of 93 SME network members replied; these responses comprise the database used for the analysis. Five members overlapped in the different networks; that is, they participated in two of the three networks. In the data analysis, these five companies participated in each of the networks they were members of and, thus, were doubly counted in the database. This method was applied to generally reveal the networks as stand-alone units independent of any other affiliations the members might have. Overall, it means that 55 separate SMEs replied.

4. Foundation and description of data variables

A short description of the network profile in economic terms describes the financial resources that were available in the networks. The three networks represented an estimated total turnover corresponding to approximately 100 million Euros calculated based on average figures. A similar calculation can be carried out with regard to the total workforce of fulltime staff: approximately 700 employees in total among the networks. To obtain an improved understanding of growth in networking SMEs, it is therefore relevant to study economic development in Denmark. Data were collected and statistically analysed to provide a better understanding of the networks. The variables are primarily analysed statistically for correlation to demonstrate how well the data can represent and reveal the same behaviour using the variables employed in the hypotheses. A brief examination of the material reveals the following.

The data were collected from April to May 2009, when the financial crisis had a marked impact on Danish companies. The data collected from the networks shown in Figure 1 describe the companies' average growth rate for the previous two years and what they expect the growth rate to be for the coming two years. The growth rates are high in comparison with the general level of growth in Denmark in terms of Gross National Product (GNP) per year at current prices. GNP change in Denmark was registered by Statistikbanken to be +1.8 per cent in 2007 and −3 per cent in 2008, based on the two years studied. Considering that the networks' growth was measured over two years and that the GNP was measured yearly, the networks had increased their growth by well over twice the overall GNP growth in 2007. This high growth can be observed in all three networks, as shown in Figure 1.

Figure 1 shows that despite the financial crisis, the network members expected to continue to grow at almost the same high level. Overall, for the three networks, the companies expected the same level of growth or a moderate increase. This implies a continued high level of growth of between 7 to 10 per cent. From the comments on growth rate, it can be observed that the members were aware of the financial crisis but developed new initiatives, which they, in general, expected would offset the effects of the crisis and lead to growth for their businesses over the next two years. This revealed that the networking SMEs were very committed to creating growth in turnover despite the financial crisis.

In the questionnaire, a long-term perspective of two years was used. The length of the financial crisis would logically have an effect on the period's expectations. A statistical factor analysis was carried out on the data collected regarding growth:

- Growth in turnover for the previous two years – *growth last two years*
- Growth in turnover for the next two years – *growth next two years.*

In Table I, a clear positive correlation was demonstrated between past growth and future growth in these food networks. This is aligned with Davidsson *et al.*'s (2010) resource-based approach. Therefore, these items are combined in an index for growth, termed *I-growth*, such that they can be used in an integrated manner in the statistical analysis. Growth in the analysis was thereby defined as the average combination of growth for the previous two years with the expected growth for the next two years.

In the analysis, passion was defined by variables that, according to the literature review, can reveal information regarding "self-profitable and interest" actions. Passion refers to the will to win despite competition, the will to take risks for future return and the will to act on opportunities. These variables were as follows:

- It is important to beat competitors – *win*.
- We are risk-takers in relation to other similar companies – *risk*.
- We appreciate taking actions quickly – *action*.

The variables measure the determination and energy of the SME actions in daily tasks for self-profitability, and accordingly, passion within the SME networks for innovation. A statistical factor analysis of these questions was performed, and the results are presented in Table II to reveal their correlation.

Table II reveals a clear positive correlation between the three variables of wanting to win, taking risks and acting in a business context. This clear distinction was anticipated from the literature review on "self-profitability and interest". Therefore, these variables are combined in an index measuring passion, termed *I-passion*, for use in the statistical analysis.

Compassion was identified using the variables that, according to the literature review, can reveal information about "other-profitability and interest" actions realised out of concern for the employees and their well-being. These variables were as follows:

- It is important to maintain a positive mood in our company – *mood*.
- Group performance is important for the company's success – *group*.
- Employees are involved in the decision-making processes – *involvement*.

Component matrix[a]	Component 1
Growth last two years	0.872
Growth next two years	0.872

Notes: Extraction method: principal component analysis; [a]1 components extracted

Table I. Factor analysis of growth variables

Component matrix[a]	Component 1
Win	0.698
Risk	0.769
Action	0.861

Notes: Extraction method: principal component analysis; [a]1 components extracted

Table II. Factor analysis of passion variables

- Each employee's performance is important to the company's success – *employee*.
- We recognise the performance of our employees by rewarding them – *reward*.

These variables showed the energetic and active desire to contribute to the well-being of employees in their daily work in the food-networking SMEs. These variables measured how much the respondents care about creating a positive mood in the company, the social aspect of working in groups, acknowledging employees and their work, involving employees and acknowledging each employee's importance to their company and rewarding them for it. Together, this forms the active employment of other-profitability and compassion.

Table III reveals a clear positive correlation between the five variables of mood in the organisation, group performance, involvement, care for the importance of the individual and reward. Therefore, these variables are combined in an index measuring compassion, termed *I-compassion*, for use in the statistical analysis.

The innovation issues of new ideas, learning and the control of resources are perceived as intermediates in the impacts of passion and compassion on growth. This means that measurements of variables representing new ideas, learning and the control of resources are needed as intermediates between passion and compassion on the one hand and the resulting growth in turnover on the other.

New ideas can come from two sources: employees and management as follows:

- We often implement new ideas we get from our employees – *employee ideas*.
- We often implement new ideas from management – *manager ideas*.

Although a slight positive correlation exists between these two variables, they were retained separately as variables for the elaboration of new ideas in the networking SMEs.

Learning was identified with four responses representing Kolb's (1984) notion of practice learning cycles; these responses were as follows:

How do you learn best?

(1) *Observing*: Watching what is happening – *observation*.

(2) *Analysing*: Finding the causes and what they mean – *analysis*.

(3) *Acting*: Acting here and now to gain the experience – *action*.

(4) *Reflecting*: Thinking about opportunities to learn something new – *reflection*.

The results of a statistical factor analysis are presented in Table IV regarding these responses to reveal their correlation.

Component matrix[a]	Component 1
Mood	0.699
Group	0.776
Involvement	0.872
Employee	0.786
Reward	0.900

Notes: Extraction method: principal component analysis; [a]1 components extracted

Table III.
Factor analysis of compassion variables

Table IV reveals a clear difference between action and the other three variables. Two indexes were therefore identified, one for action in the learning process, termed *action learning*, and another for the remaining issues in the learning process, termed *I-other learning*.

Control of resources was identified here by variables that can reveal information about the control of resources in the companies. These variables were related to the food network's relevant practices and were as follows:

- We supervise staff performance – *staff control*.
- We supervise the quality of our products – *product control*.
- We supervise the manufacturing process – *process control*.
- We write down the working procedures for our employees – *procedure*.
- We give detailed oral instructions to our employees – *instructions*.
- We use the IT systems to ensure quality control – *IT*.

A statistical factor analysis was carried out, and the results are presented in Table V to reveal their correlation.

Table V reveals a clear positive correlation divided into two components. The first component contains the control of the employees in different forms. The second component contains the control of the product and production quality. Therefore, two indexes are created, one for controlling the employees, termed *I-employee control*, and the second for controlling quality, termed *I-quality control*.

	Component	
Rotated component matrix[a]	1	2
Observation	0.884	0.006
Analysis	0.849	0.232
Action	0.039	0.991
Reflection	0.899	−0.069

Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization; [a]Rotation converged in three iterations

Table IV.
Factor analysis of learning variables

	Component	
Rotated component matrix[a]	1	2
Staff control	0.787	0.063
Product control	−0.086	0.924
Process control	0.138	0.910
Procedure	0.854	−0.020
Instructions	0.700	0.498
IT	0.727	−0.212

Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization; [a]Rotation converged in three iterations

Table V.
Factor analysis of control variables

All data variables have now been presented and analysed for their ability to express the same behaviour (correlation analyses of responses) for employment in the statistical analyses.

5. Statistical model, analyses and findings

The hypotheses are elaborated in a structural equation model (SEM), which contains a path diagram including all of the hypotheses. This means that all hypotheses involving the direct and intermediate impacts from passion (self-profitability and interest) and compassion (other-profitability and interest) on growth are included in the model. This integrated model allows for decomposition by tracing the paths backwards in the path diagram. The tool used is an Statistical Analysis Program in Social Science (SPSS) add-on called Analysis of MOment Structures (AMOS). A prerequisite for the use of this tool is the existence of a time-difference in the occurrence of the elements. In the model, passion and compassion are perceived as cultural aspects of the organisation that are present before innovation and growth in turnover emerged.

In Figure 2, the hypotheses are tested in a stepwise backwards elimination of the least significant factor combinations. The hypotheses are all one-tailed, which gives a significance level for a causal acceptance of a p-value < 0.05. The analysis is based on maximum likelihood estimation (MLE). In this research, the sample was relatively small for employing this significance level.

However, MLE is employed, and "simulation studies suggest that under ideal conditions, MLE provides valid and stable results with sample sizes as small as 50" (Hair *et al.*, 1992, 2010, p. 661). The significance obtained in the stepwise backwards elimination is therefore held at the $p = 0.05$ level to reveal only the most significant causal relations.

The SEM MLE analysis ran for more than 12 steps before the significance level became very close. The significance levels are shown in Table VI, where the p-values range from zero to 0.053. The p-value of 0.053 is slightly above the required significance level, but in relation to the small sample, this value is regarded as significant. A goodness of fit measure on the comparative fit index is reported as 0.997 for the model, which is sufficient for validity of the significant model.

Table VI demonstrates the clear significance of the remaining p-values, especially when the small sample size is considered. The influence of passion on quality control and the influence of compassion on manager ideas were significantly strong.

The sole causal relations of significance are illustrated in Figure 3. Many elements are eliminated, but the remaining elements in the model reveal considerable impacts.

In Figure 3, relatively strong covariance can be identified between passion and compassion in the three food networks. This finding indicates that despite the clear distinction between the two antecedents as revealed theoretically in the literature review and analytically through correlations in the collected data, the networking participants are able to integrate passion and compassion. In these entrepreneurial food networks, there is a standardised proportion of 0.57 covariance, indicating that approximately half of the SMEs were integrating passion (self-profitability) and compassion (other-profitability) simultaneously in their actions during daily work.

Furthermore, very high significant impact is revealed between compassion and passion, and manager idea development, with proportions of 0.61 and 0.21, respectively. It is interesting to note that the impact of compassion to manager idea development is

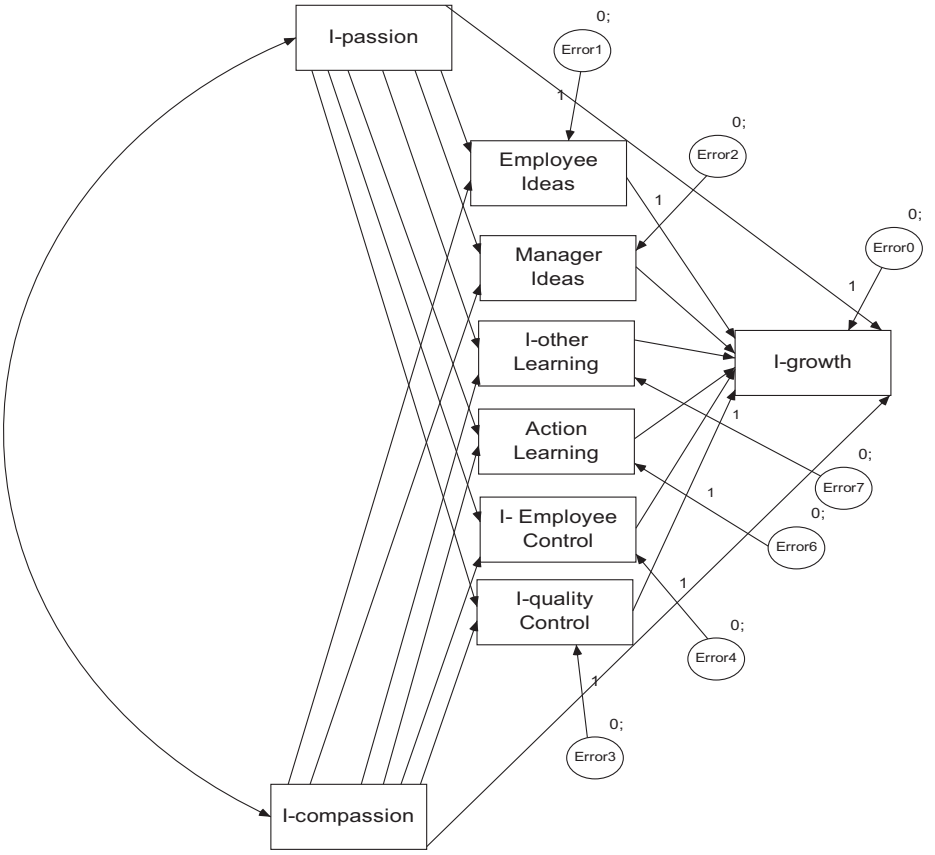

Figure 2.
Path diagram of passion and compassion relating to growth

Variables	Estimate	SE	C.R.	*p*	Label
I-quality ← I-passion	0.700	0.132	5.306	***	
Manager ideas ← I-passion	0.272	0.139	1.958	0.050	
Manager ideas ← I-compassion	0.753	0.134	5.637	***	
I-growth ← Manager ideas	0.293	0.120	2.448	0.014	
I-growth ← I-quality	−0.246	0.127	−1.934	0.053	

Table VI.
Significant-level estimations in path diagram

considerably higher than that between passion and manager idea development. Management ideas leading to growth appear to be driven by compassion and the well-being of people and to a lesser extent by the self-profiting passion to win, take risks and act on opportunities. Both passion and compassion have significant impacts, and neither can be dispensed with; however, compassion has the most considerable impact. Furthermore, a very high significant impact is revealed between passion and I-quality control, with a proportion of 0.58. Quality is an important ingredient in their business model, as also revealed in the comments of the respondents on the relative high price

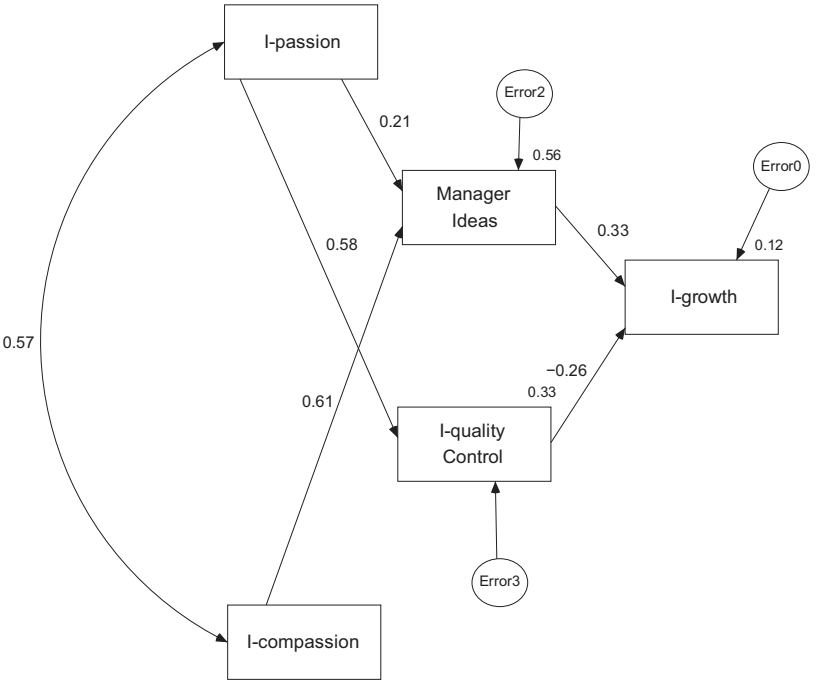

Figure 3.
Path diagram showing significant relations between passion and compassion, and growth

level for products and services. They perceive themselves to be in a niche market where customers pay for the specific requirements they have. The statistical analyses reveal passion to be more of a prerequisite for quality control than for manager idea creation in the food network context.

Moreover, manager ideas have a significant impact on growth, with a proportion of 0.33. It appears that managers implement their own ideas, and some of the ideas result in growth in turnover. Manager ideas are revealed as important for growth in turnover.

An interesting relationship is revealed between quality control and growth. The impact is significant, but in an unanticipated way. The hypothesis was that quality control would increase turnover through improved products and processes, which is not the case. Quality control reduces growth, which is revealed by the negative impact between the two issues (−0.26). Aligned findings are also revealed in other studies (Westeren, 2008), which show both positive and negative impacts from quality control on growth. An explanation could be that these SMEs spend too much time and effort in controlling quality. Employees, as a consequence of the size of the company, in general, are very close to the customers, production and service. Employees can realise relatively easily if something is wrong based on the customer's perspective and adapt their activities to perform at the level of quality required by the customers without the implementation of a managerial control system. The findings reveal that too many resources can be allocated to quality control and be wasted as a result. Indeed, this may even hinder growth directly. Furthermore, a distinction between quality control and quality management practices could possibly provide different results, e.g. the perception of quality control (ISO standards) could be anticipated with a negative

impact on growth (too costly in relation to benefits) and the perception of quality management practices with a more active consideration regarding quality could be anticipated with a positive impact on growth (e.g. early recognition of new quality requirements). This could be an explanation for the different results in this area; however, further research is needed to elaborate the difference.

Additionally, the issue of control can result in products that are too similar and that look industrially produced, such that they do not signal "handmade" to reassure the customer regarding the quality and the taste of the food. For example, this is true of bread products, which preferably should look a bit different to customers' eyes to signal that they are "hand-made".

6. Discussion of findings

Looking deeper into the elimination process, it is worth noting that neither passion (self-profitability) nor compassion (other-profitability) has a direct impact on growth. These factors were both eliminated early in the process. Despite this finding, the intermediate impact through the issues within innovation of new ideas, learning and the control of resources is remarkable. The intermediate impact from passion to growth was twofold $(0.21 \times 0.33) = 0.069$ and $(0.58 \times -0.26) = -0.151$, and the intermediate impact from compassion was $(0.61 \times 0.33) = 0.201$. Unfortunately, the negative relationship between quality control and growth provides an overall negative intermediate impact from passion on growth. Other research (Westeren, 2008) has yielded similar results. Further research is needed to pursue the impact of quality control on growth and perhaps a distinction between quality control and quality management procedures would provide an enhanced understanding.

Employee ideas are also not significant for growth. The same is true for learning, in general, and employee control. In these SMEs, it is surprising that ideas from employees do not have a significant impact. Further qualitative research into innovation and the role of managers and employees on implementing new ideas in the participating SMEs reveal that managers and employees work so closely together on new ideas that it can be difficult to say who actually came up with the new idea first. Furthermore, the SME managers often perceive themselves and the SME as one unit. This means that the managers often perceive new ideas on business development in the SME as their own even though the idea originally might have been generated from employees. Thus, the answers from respondents on the formulated question do not really reveal the underlying assumption on a difference between new ideas from management and from employees. Further research will be interesting to conduct on idea generation in entrepreneurial food-networking companies.

It is similarly surprising that learning is not significant. However, other studies, such as that of Westeren (2008), have found that learning and, more generally speaking, the level of competence as a factor contributing to innovation and growth, often works through other factors, e.g. management processes. An explanation for the finding regarding learning could be that learning is not a specific necessity for growth, either because managers and employees know a lot about the business themselves or because they work as a team in these SMEs and, therefore, do not see collaboration on solving challenges as a learning issue, but interpret it as "daily work" even though e.g. products and processes have been developed end therefore have required a lot of learning in the organisation. Further research is also of interest regarding this issue. In these SMEs,

ideas could be generated by teams in which the members learn continuously from one another, thereby pursuing innovation and growth.

The significant findings in this paper make a contribution to an enhanced understanding of the impact of organising passion and compassion on innovation and growth. Passion and compassion cannot be described as relating to growth unless the innovation content of new ideas, learning and the control of resources is analysed and elaborated. The significant findings reveal that organising innovation in an SME food-producing network context employs the duality of passion (self-profitability and interest) and compassion (other-profitability and interest), resulting in an impact on innovation issues; managerial ideas are especially important to pursue for the purpose of growth. The intermediate innovation issues of new ideas, learning and the control of resources have to be measured and analysed to reveal an impact on growth. In particular, compassion (other-profitability and interest) is important in combination with passion (self-profitability and interest). Passion, in relation to quality control, seems to result in negative growth in the SME networking context. The co-variation between compassion (other-profitability and interest) and passion (self-profitability and interest) provides a flexible and adjustable approach on taking care of customer needs (other-profitability and interests) and the need for business development and growth (self-profitability and interest) in the SME network context.

In this paper, the research is conducted within the food industry. The findings could probably be valid for other industries as well. For verification of this assumption, further research is needed.

7. Conclusion

This paper illustrates the impacts of passion and compassion on innovation and growth within networking SMEs in the food industry in Denmark. Related research shows that the Danish context provides relatively high levels of social capital and economic performance in relation to SME innovativeness. The research in this paper is conducted through a statistical analysis of variables within passion (self-profitability and interest), compassion (other-profitability and interest) and growth. Moreover, an intermediate parameter on innovation containing new ideas, learning and the control of resources was added to aid the analyses in SEM. This analysis provided findings on the direct impacts of passion and compassion on growth and the impact of adding the intermediate issues of innovation into the analysis of growth. The aim of this research is to enhance the understanding of innovation and growth in an SME network context.

No significant direct impact of passion (self-profitability and interests) and compassion (other-profitability and interest) was found on growth in the three SME networks. The intermediate innovation issues aided in understanding and explaining the impact of compassion and passion on growth. It was revealed that both compassion and passion had a high co-variation and a significant positive impact on manager ideas, which, again, had a positive influence on growth. However, the impact from compassion was considerably higher than that of passion, underpinning the importance for SMEs to be able to act upon the needs of others (other-profitability and interest). The research also highlights an intermediate negative impact from passion on growth as a result of spending too much effort on quality control in the food-producing SME context. This is both supported and contradicted by other research and, therefore, needs further research.

This research contributes to the field by enhancing knowledge and providing an explanation of the role of passion (self-profitability and interest) and compassion (other-profitability and interest) in a firm network context with the aim of pursuing innovation and growth. For the SMEs, the most important issue was not their own interest but their interest for others. Previous literature has emphasised one or the other, or a balanced blend of the two. Here, the most beneficial blend is revealed to be a mixture of approximately 2/3 compassion (other-profitability and interest) and 1/3 passion (self-profitability and interest). This indicates a greater emphasis on the needs of others to enable innovation and growth. It underpins the importance of social capital for economic performance as elaborated by Svendsen and Svendsen (2009). The finding is interesting both for the SMEs themselves to pursue innovation and for policy bodies trying to motivate the SMEs to provide growth and wealth creation.

Further research on passion, compassion and the innovation issues of new ideas, learning and the control of resources is needed to enhance these findings and explain them more thoroughly.

In particular, further research on the negative impact of quality control and terms employed (as supported and contradicted by other empirical findings), the non-significant impact of employee ideas on growth and the non-significant learning issue in SME team-organisation is needed to enhance our understanding of innovation and growth in the SME food-producing network context. Moreover, further research in other industries would shed light on the generalisation of the findings to other industries.

Since 2009, all three networks have changed in relation to the participating SMEs and the activities in the network context, e.g. one network has changed its name (Food Joys), while another network has closed the network homepage (Waddensea). However, the SMEs still pursue their aim for innovation and also often succeed through their flexible approach on passion (self-profitability and interest) and compassion (other-profitability and interest) integrated in their activities. This is revealed through further interviews and information provided on meetings. The networking SMEs adapt to the new prerequisites and continue innovation.

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Further reading

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Tove Brink completed her MSc in Economics and Business Administration in 1981. Since then, she has been working with business administration, financial management, M&A, strategy and organisational development. In 1999, she completed her MBA at Henley in strategy and organisational development. Internationally, she has worked at Danfoss as Global Business Development Manager. Furthermore, she runs her own consultancy firm since 2005. She has written a book in 2005 called "The CompetenceWeb" about innovation and learning based on her practical experiences. Since 2007, she also has been on the board of SME companies. At the Danish Centre for Rural Research, she has been engaged as a PhD fellow since 2008 with the theme: "Innovation and learning in organisations and networks". She

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