The moderating impact of the family CEOs generation on the relationship between entrepreneurial passion and entrepreneurial orientation

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Introduction:

Research on passion has its origin in research fields such as educational psychology, sports psychology and organizational behaviour. It has been found that passion impacts the motivation, cognition and behaviour of individuals (Perrewé et al., 2014; Stoeber et al., 2011; Vallerand & Miquelon, 2007). In recent years, passion has made its way to entrepreneurship literature. Ever since Cardon et al. (2009) introduced the concept of entrepreneurial passion (EP), defined as "consciously accessible, intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur", it has become a well-researched construct in entrepreneurship literature. There is a substantial amount of empirical research showing that passion is even a crucial part of entrepreneurship. De Mol et al. (2019) claim that passion contributes to behaviour and outcomes for entrepreneurs, ventures and employees. Being passionate appears to be an essential requirement for entrepreneurs who aim to be successful. This is due to the high level of perseverance that is needed to carry out entrepreneurial activities in adverse, unstable and demanding situations. On top of that, higher and more extended persistence is needed compared to other work actions (Baron et al., 2016; Foo et al., 2009). Entrepreneurial passion has substantial benefits for entrepreneurs. EP has been found to have an impact on venture creation and performance (Adomako et al., 2019; Drnovsek et al., 2016; Stenholm & Renko, 2016), entrepreneurial behaviours (Cardon & Krik, 2005; Kang et al., 2016; Shockley & Turner, 2016) and entrepreneurial attitudes (Biraglia & Kadile, 2017; Huyghe et al., 2016). Several authors (e.g. Campos, 2017; Zollo et al., 2020) have also uncovered that entrepreneurial passion influences organizational-level and individual-level entrepreneurial orientation. Unlike these studies, we focus on the family firm context, as their distinctive attributes are often overlooked in entrepreneurship literature.

It is important to investigate the entrepreneurial passion concept in family firm context as the subdimensions of entrepreneurial passion can be directly linked to a family firm's life stage. The first subdimension is innovativeness and refers to the passion an entrepreneur experiences when "identifying, inventing and exploring new opportunities" (Cardon et al., 2009). Entrepreneurial passion for founding, the second subdimension, is formed when the entrepreneur is passionate for "activities involved in establishing a venture for commercializing and exploiting opportunities" (Cardon et al., 2009). Lastly, EP for developing is experienced in cases "where the entrepreneur's passion is for activities related to nurturing, growing, and expanding the venture once is has been

created" (Cardon et al., 2009). The subdimensions of EP might, however, not always be identically translated into firm-level outcomes. We believe that this is due to a variable that has been overlooked, namely the generational stage of the family CEO.

First of all, a CEO's role is very important in family businesses, even more so if it is a family CEO (Zona, 2016). Hambrick and Mason's (1984) upper echelon theory indicates that family CEOs hold a substantial amount of power due to their managerial position in the firm. This managerial power allows a family CEO to impact firm-level outcomes and might therefore convert their entrepreneurial passion into firm-level entrepreneurial orientation. Secondly, the generational stage might influence the conversion of EP into SEB. A family CEO from the first generation (i.e. the founder) might for example excel in converting EP for founding into EO but might not be able to translate EP for developing into EO.

This paper uses the well-researched construct of entrepreneurial orientation (EO) as our dependent variable (e.g.) as it has been found to be an important antecedent of family firm performance (Rauch et al., 2009). In this research, entrepreneurial orientation is defined as the strategy-making and opportunity-developing practices executed by businesses (Covin & Slevin, 1991; Dess & Lumpkin, 2005). EO is an academically validated construct and, therefore, a sound basis for this multi-level research (Covin & Miller, 2014). The different subdimensions of EP will each affect EO in their own way depending on the generational stage of the family CEO. The usage of EO as our dependent variable subsequently offers opportunities for future research.We test our hypotheses based on data derived from a detailed survey filled out by family CEOs, resulting in a unique sample of 147 CEOs from private Belgian family businesses. The family CEO was chosen as a respondent because of their managerial position and, therefore, the ability they possess to make firm-level decisions. Due to the specific nature of the required respondents for this research, targeted sampling was applied.

The structure of the paper is as follows. In the next section, we introduce the theoretical background on EP and EO. We then discuss the relationship between these variables and the moderating effect of the generational stage of the family CEO. In the third section, we take a look at the research methodology. The fourth section of this paper shows the analyses and results. Lastly, in the fifth section, we review the theoretical and practical implications, followed by the limitations of this study and suggestions for future research.

Theory and hypothesis development

Entrepreneurial passion

The concept of passion originated in the psychology research field (e.g. Stoeber et al., 2011) and has found its way to entrepreneurship literature. By impacting behavioural and firm-level outcomes, it has become a crucial part of successful entrepreneurship (de Mol et al., 2019). Entrepreneurial passion (EP) can be defined as "consciously accessible, intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur" (Cardon et al., 2009).

If we take a closer look at this definition, we can see that EP consists of two components: intense positive feelings and identity centrality. The component of *intense positive feelings* can be recognized in how most people view passion, namely, as an intense feeling that creates energy and the urge to do something. Cardon et al. (2009) have gathered definitions of passion (Csikszentmihalyi, 1990; Frijda, 2005; Vallerand et al., 2003), concluding that hot, strong and desire-filled feelings are almost always associated with passion. Most research on entrepreneurial passion refers to this desire, either directly or by using synonyms such as enthusiasm or intense longing (Cardon et al., 2009). Wincent et al. (2008) highlight the importance of distinguishing the experience of passion from the experience of emotions. The authors claim that passion includes perceiving intense positive feelings for something valuable to the entrepreneur and are therefore more enduring than the experience of emotions. Emotions might change more quickly when exposed to external stimuli. Subsequently, Chen et al. (2009) state that when a person is passionate about a certain interest, it is hard for that person to stop thinking about that particular interest.

The component of *identity centrality* states that the aforementioned intense positive feelings are experienced when engaging in activities that are important and central to the self-identity of the entrepreneur (Cardon et al., 2012; Farmer et al., 2011; Fauchart & Gruber, 2011; Murnieks et al., 2014). Both social psychology and entrepreneurship literature have investigated the relationship between a person's self-identity and the commitment or motivation towards certain activities (Burke & Reitzes, 1981, 1991; Cardon et al., 2012; Goffman, 1959; Stryker & Burke, 2000). The concept of identity refers to the internalization of a person's characteristics that they see as central or distinctive and that are reflected in the roles they exhibit (Burke & Reitzes, 1991; Cardon et al., 2012).

Passion has a significant impact on goal-oriented insights, practices and important outcomes for the entrepreneur itself (Drnovsek et al., 2009). Cardon & Kirk (2015) assert that both components are fundamental in order to conceptualize and operationalize the concept of entrepreneurial passion.

Cardon et al. (2012) have built on previous research, which explained the variations in identity where entrepreneurs engage in activities with a high level of identity alignment. Their research shows three roles in the entrepreneurial process for which an entrepreneur might exhibit a certain level of passion: passion for inventing, passion for founding and passion for developing (Cardon et al., 2012). Passion for inventing occurs when an entrepreneur feels passionate about activities regarding the identification, invention and exploration of new opportunities. Passion for founding takes place when the entrepreneur feels passionate about activities regarding the assembly of financial, social and human resources that are necessary to start a firm. Lastly, passion for developing relates to the (financial) growth and (market) development of the business (Cardon et al., 2009, 2012; Drnovsek et al., 2009).

According to Zollo et al. (2020), the concept of entrepreneurial passion has recently been linked to entrepreneurial success. When looking at entrepreneurial behaviours specifically, EP for inventing has been found to have a strong positive relationship with innovativeness (Kang et al., 2016; Shockley & Turner, 2016). Previously, Cardon & Kirk (2015) discovered that both passion for inventing and passion for founding led to entrepreneurial persistence, passion for developing, however, did not. Literature on the creation and performance of ventures has shown that entrepreneurial passion for developing gradually leads to venture growth by increasing goal commitment (Drnovsek et al., 2016). Adomako et al. (2019) later identified EP for developing as a predictor of firm performance. Entrepreneurial passion also has been found to affect the entrepreneurial attitudes of an entrepreneur (Newman et al., 2021). Research by Bariglia & Kadile (2017) shows that EP for founding positively influences entrepreneurial intentions. These intentions have been found to be influenced by passion for inventing as well, this, however, being in a spin-off and start-up context (Huyghe et al., 2016).

To date, despite the important consequences of EP, the concept of entrepreneurial passion has not yet been explored in a family firm context. We believe, however, that this context is especially interesting when investigating EP as a family CEO exhibiting high levels of EP might have a significant impact on firm-level outcomes due to the managerial position and strong identification with the family business. Moreover, the EP might be contagious to others in the firm, especially in family firms where

interpersonal relationships result in a strong identification with the family business (Campos, 2017). In order to examine which type of passion has an impact on firm-level outcomes, we have chosen entrepreneurial orientation as our dependent variable, as this has been previously linked to family firm performance (Rauch et al., 2009).

Entrepreneurial orientation

The concept of entrepreneurial orientation stems from research by Miller (1983). In 1989, Covin & Slevin expanded this study. EO is defined as the practices that businesses use during the strategy-making process to identify and develop new entrepreneurial opportunities (Covin & Slevin, 1991; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996; Zollo et al., 2020). Naldi et al. (2007) later refer to EO as "a construct that addresses the mindset of firms engaged in the pursuit of venture creation and provides a useful framework for research into entrepreneurial activity".

Consistent with most EO research (Lumpkin & Dess, 1996; Montiel Campos, 2007; Zollo et al., 2020), this study will investigate the concept of entrepreneurial orientation at the firm level.

Miller (1983) proposes three subdimensions of entrepreneurial orientation: innovativeness, risk-taking and proactiveness. He explains that entrepreneurial businesses engage in product-market innovation, take on high-risk projects and introduce proactive ideas ahead of their competition (Miller, 1983). 13 years later, Lumpkin & Dess (1996) recommended the addition of 2 new subdimensions: competitive aggressiveness and autonomy. Despite the disagreement concerning the content of EO, neither one is superior, and the five subdimensions are generally accepted in entrepreneurship literature (Martin & Lumpkin, 2003; Short et al., 2009). We, however, follow many other authors (e.g. Cruz & Nordqvist, 2012; Naldi et al., 2007; Pimental et al., 2017; Sciascia et al., 2013) and rely on the EO-conceptualization as presented by Miller (1983) / Covin & Slevin (2005).

The first subdimension is *innovativeness*, which refers to "a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes" (Lumpkin & Dess, 1996). This definition was later adopted by many other authors in entrepreneurship literature (e.g. Dess & Lumpkin, 2005; Short et al., 2009; Zellweger & Sieger, 2010). The second subdimension is risk-taking, explained by Miller & Friesen (1978) as "the degree to which managers are willing to make large and risky resource commitments – i.e., those which have a reasonable chance of costly failures". The third and final subdimension is proactiveness. According to Martin & Lumpkin (2003), this refers to a mindset that is forward-

thinking and seeks for new opportunities. Proactiveness generally leads to new venture success (Becherer & Maurer, 1997; Covin & Slevin, 1996; Knight, 1997; Martin & Lumpkin, 2003).

Further exploration of these subdimensions offers opportunities for future research. This study, however, follows Miller (1983) / Covin & Slevin (2005) and conceptualize EO as a 'reflective construct'. Consequently, we consider the concept of entrepreneurial orientation as one variable without investigating the three subdimensions individually.

Entrepreneurial orientation has received a lot of academic attention in recent years. Previous research shows that individual-level variables can have an effect on firm level entrepreneurial orientation (Chaston & Sadler-Smith, 2012; Miller & Le Breton-Miller, 2011). EO has also been explored in a family firm context; research by Pimentel et al. (2017) states that entrepreneurial orientation is lower in family businesses due to the negative relationship between family involvement and EO. Findings by Madanoglu, Altinay & Wang (2016) conversely showed that family involvement has no direct impact on the innovativeness and risk-taking subdimensions of EO.

Previous studies have also reported that EO can be enhanced by comprehensive strategic decision making, willingness to change, long-term orientation and by perceiving technological opportunities (Eddleston, Kellermanns & Zellweger, 2012; Kellermanns & Eddleston, 2006; Weismeier-Sammer, 2011). On top of that, entrepreneurial orientation has been found to be positively influenced by environmental dynamism and knowledge transfer (Casillas, Moreno & Barbero, 2011; Martínez, Galván & Palacios, 2016). Recently, researchers have shown an increased interest in the relationship between EP and EO (Campos, 2017; Zollo et al., 2020). Surprisingly, the impact of the family CEO's entrepreneurial passion on EO has not yet been explored in a family firm context.

Entrepreneurial passion of the family CEO as a driver for firm-level EO

We specifically zoom in on the role of the family CEO, who is, according to the upper echelon theory, generally considered to be one of the most important and powerful actors within a firm (Hambrick & Mason, 1984; Minichilli et al., 2010). This EP-EO relationship is especially relevant in family firms that are owned and led by a family CEO as they will be monitored or controlled less, in comparison to non-family CEOs (Lin & Hu, 2007). They might therefore have more freedom to influence the firm-level strategy-making process (Friedman & Carmeli, 2021). Moreover, by building on insights from the theory of imprinting (e.g. Barbera et al., 2018; Jaskiewicz et al., 2015; Kammerlander et al., 2015; Marquis & Tilcsik, 2013), we suggest that the EP of a family firm CEO can be imprinted on

other members of the family business and eventually influence firm-level outcomes such as EO. Marquis & Tilcsik (2013) define imprinting as "brief sensitive periods of transition during which the focal entity exhibits high susceptibility to external influences; a process whereby the focal entity comes to reflect elements of its environment during a sensitive period; and the persistence of imprints despite subsequent environmental changes" (p. 195). Research by Campos (2017) also shows that passion is transferrable and contagious to other people in the company (Brettel et al., 2015; Cardon, 2008; De Clercq & Rius, 2007; Engelen et al., 2014). He argues that this contagion of passion is an important factor in establishing an organizational culture in which the achievement of EO is encouraged. Zollo et al. (2020) explain that EP is frequently linked with the entrepreneurial orientation of an individual, which originates from certain emotions, feelings and behaviour. Finding by Kiani et al. (2019) and Baron & Tang (2011) also demonstrate a positive relationship between EP and organizational innovation.

Within entrepreneurship literature, imprinting research has revealed that the choices made at the onset of the firm (DeTienne, 2010) together with founding conditions (Boeker, 1989), like the EP of the founding CEO, impact the firm and its outcomes throughout its life (e.g. Mathias et al., 2015), suggesting a positive relationship between EP for founding and a firm's entrepreneurial orientation. On top of that, we also expect a positive relationship between EP for inventing and EO as Cardon & Kirk (2015) find a positive relationship between EP for inventing and entrepreneurial persistence. Research by Leonelli et al. (2019) later linked entrepreneurial resilience to entrepreneurial persistence and subsequently to entrepreneurial orientation. Next, research by Kang et al. (2016) and Shockley & Turner (2016) present a positive relationship between passion for inventing and innovative behaviour. Research by Campos (2017) finally states that an entrepreneur's high levels of entrepreneurial passion for developing predict greater EO.

Following previous research, we suggest the following hypotheses, unravelled in threefold:

H1a: *A family firm CEO's EP for inventing has a positive effect on the family firm's EO.*

H1b: *A family firm CEO's EP for founding has a positive effect on the family firm's EO.*

H1c: *A family firm CEO's EP for developing has a positive effect on the family firm's EO.*

The moderating role of the generational stage of the family CEO

Above, we argued that that the entrepreneurial passion of a family CEO positively influences the entrepreneurial orientation of the family business. It is, however, not solely important to investigate the relationship between EP and EO, but also to scrutinize when this effect gets stronger or decreases. Family business research often highlights the impact of generational differences as it is one of its main distinctive attributes: members of first, second, third or later generations will have different goals, challenges and impact on the decision-making and strategy of the business (Muñoz-Bullon et al., 2018). Research by Sciascia et al. (2014) points out how different generational stages also have an impact on the pursuit of different SEW-dimensions. They explain for example that later-generation family CEOs are expected to be less focused on SEW-preservation and aim towards financial wealth increase. We, therefore, assert that the generational stage of a family CEO will influence the conversion of entrepreneurial passion into entrepreneurial orientation. Finally, Cardon et al. (2012) recommend the separate consideration of the dimensions of entrepreneurial passion when investigating its antecedents and/or effects.

As previously stated, passion for founding refers to the passionate feeling an entrepreneur might experience during activities regarding the assembly of financial, social and human resources that are necessary to start a firm (Cardon et al., 2009). As these activities take place at the onset of the firm, we believe that passion for founding will be more easily translated into firm-level EO for first-generation family CEOs as opposed to second-, third- or later-generation family CEOs. A similar ratio regarding the generations is expected for passion for inventing as it refers to the identification, invention and exploration of new opportunities (Cardon et al., 2009). The 'contagious effect' of EP of the family CEO (e.g. Cardon, 2008; Ho & Astakhova, 2020) on the firm's entrepreneurial orientation will thus be strongest when the family firm is led by a first-generation family CEO since the creation of strategic phenomena, like EO, will only start in this founding stage. Schein (1983) explains that it is the founding generation who has a major role in the creation of an organizational culture. Founders usually have an idea on how to start a business and this vision will be translated into the corporate culture (Schein, 1983). When the family firm is passed to subsequent generations, the firm has already formed its own identity and strategy-making process, like EO. Therefore, we propose that second and later generation CEOs can still use their EP for founding to drive firm-level EO as passionate CEOs are still contagious (e.g. Ho & Asktakhova, 2020), but the positive effect of their

passion for founding on firm-level EO will be weaker as the entrepreneurial culture in the firm has already been formed (Cruz & Nordqvist, 2010; Kidwell, Eddleston & Kellermanns, 2018).

We expect that the translation of EP for developing into firm-level entrepreneurial orientation will be stronger for second or later-generation family CEOs. This is because the activities regarding EP for developing (i.e. nurturing, growing, and expanding the venture) usually take place once the firm has been created. We thus expect a family CEO from a later generational stage with higher levels of EP for developing to cause higher levels of firm-level EO as these entrepreneurial activities should, in this generational stage, be part of the firm's orientation in order to maintain high levels of firm performance. We, therefore, suggest the following three hypotheses:

> **H2a:** The generational stage of the family CEO moderates the relationship between EP for inventing and EO, in such a way that the positive EP-EO relationship is strongest in first generation family firms and reduces when the generational stage of the CEO increases.
>
> **H2b:** The generational stage of the family CEO moderates the relationship between EP for founding and EO, in such a way that the positive EP-EO relationship is strongest in first generation family firms and reduces when the generational stage of the CEO increases.
>
> **H2c:** The generational stage of the family CEO moderates the relationship between EP for developing and EO, in such a way that the positive EP-EO relationship is lowest in first generation family firms and increases when the generational stage of the CEO increases.

In order to assess the aforementioned hypotheses, this research examines the impact of individual level EP on firm level EO. The generational stage of the family CEO is expected to moderate this relationship. The research model is depicted in figure 1.

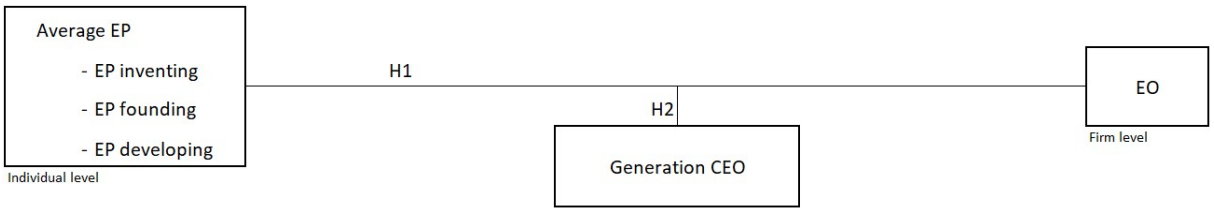

Figure 1: Conceptual research model

Method

Sample and data collection

The sample consisted of private Belgian family businesses, defined as a firm that is perceived as a family business by the family CEO and where at least 50 percent of the shares are owned by family members. Family business that are owned and led by a single entrepreneur were excluded from this sample. The data was collected using an online survey, constructed with Qualtrics. The survey was then sent out via e-mail to the family CEOs of around 850 private Belgian family firms. A link to the survey was subsequently shared on social media platforms such as Facebook and LinkedIn and the respondents that did not answer via e-mail were sent a reminder and were contacted via telephone.

Targeted sampling was chosen to select our sample cases due to their specific nature. Watters & Biernacki (1989) refer to targeted sampling as "a purposeful, systematic method by which controlled lists of specified populations within geographical districts are developed and detailed plans are designed to recruit adequate numbers of cases within each of the targets. While they are not random samples, it is particularly important to emphasize that targeted samples are not convenience samples. They entail, rather, a strategy to obtain systematic information when true random sampling is not feasible and when convenience sampling is not rigorous enough to meet the assumptions of the research design."

As this data-collection took place during the COVID-19 pandemic, our response rate was affected. We received answers from 309 respondents, resulting in a response rate of 36%. We do not know, however, how many responses were acquired via social media. To improve the quality of this research, we excluded respondents who did not sufficiently answer the survey. This quality-measure decreased the number of respondents to 147, resulting in a response rate of 17%. The firms in this sample have 89.5 employees on average and an average age of 39.6 years. Data-processing was executed using the statistical software program IBM SPSS Statistics Version 26.

Measures

Independent variable

Entrepreneurial passion was measured by using the 13-item scale as presented by Cardon et al. (2013). This scale was calculated using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cardon et al. (2013) suggested two subscales in their definition of EP: intense

positive feelings (IPF) and identity centrality (IC). IPF were measured by averaging three items for both EP for developing (Cronbach's alpha = 0.653) and EP for founding (Cronbach's alpha = 0.642). IPF for EP for inventing was captured by averaging four items (Cronbach's alpha = 0.754). IC was subsequently measured using one item. Cardon & Kirk (2015) state that a total entrepreneurial passion score is calculated by multiplying the average level of IPF by the level of IC (e.g. inventing identity centrality * intense positive feelings for inventing). Composing entrepreneurial passion following these instructions leads to a correctly weighted score. The general average level of EP was calculated by averaging the levels of EP for inventing, EP for founding and EP for developing.

Dependent variable

Entrepreneurial orientation was measured using the nine-item seven-point scale as presented by Miller (1983) / Covin & Slevin (1989). In this scale, EO consists of three subdimensions: innovativeness, proactiveness and risk-taking. As previously mentioned, we conceptualize EO as a reflective construct and consider EO as one variable by taking the average of the nine items, thereby following previous studies (Campos, 2017; Covin & Slevin, 1989). The Cronbach's alpha for entrepreneurial orientation was 0.784.

Moderating variable

To measure the *generational stage of the family CEO*, the respondent was asked to state their corresponding generation. Next, a multi-categorical variable was created distinguishing the following generational stages: first-generation family CEO, second-generation family CEO and third- or later-generation family CEO.

Control variables

This research model includes several control variables. The first is *firm size*, as larger family firms usually have more resources that can be used to engage in entrepreneurship (Zahra et al., 2004). Firm size was measured as the natural logarithm of the number of full-time employees. The second control variable is *firm age*, measured by subtracting the year in which the family business was founded from this year. Similarly, the natural logarithm of this age was used to calculate firm age. Lastly, we controlled for industry. Two dummy variables were created to distinguish the following industries: manufacturing, service and others.

Results

Before testing our hypotheses, *Table 1* summarizes the descriptive statistics and correlations. The family firms in our sample are, on average, 39.64 years old. They further employ 89.46 people on average. In regard to the generational stage of the family CEO, 40.1% is part of the first generation, 35.4% belongs to the second generation and the remaining 24.5% are members of the third-, or later generations.

The mean levels for entrepreneurial passion were, similarly to previous research, measured by looking at the intense positive feelings and identity centrality individually. The mean level of IPF for EP for inventing is 6.11 and 6.01 for IC, which is slightly higher than in previous studies (Campos, 2018; Cardon & Kirk, 2015). The mean level of IPF for EP for founding is 5.57 and IC scored 5.21 on average, comparable to earlier studies (Collewaert et al., 2016). Finally, the mean level of IPF for EP for developing is 5.89 and the mean IC level is 5.63, similar to previous research (Campos, 2017). The mean level for entrepreneurial orientation is 4.24, which is comparable to previous research (Campos, 2017; Zollo et al., 2020). In our sample, an EO-value lower or equal to three was found for 8.2 per cent of the family businesses. 77.5 per cent of the family businesses had a value between three and five. Finally, the remaining 14.3 per cent has a value ranging between five and seven.

Table 1: Descriptive statistics and pairwise correlations

		Mean	SD	1	2	3	4	5	6	7	8	9
1.	EP for inventing	37.03	8.09	1								
2.	EP for founding	29.73	12.03	0.260**	1							
3.	EP for developing	33.55	9.80	0.464**	0.448**	1						
4.	Entrepreneurial Orientation	4.24	0.86	0.293**	0.224**	0.266**	1					
5.	Generational stage of the family CEO	1.84	0.79	-0.134	-0.378**	-0.193*	-0.162*	1				
6.	Firm size (Ln)	3.46	0.73	-0.060	-0.277**	0.018	-0.024	0.619**	1			
7.	Firm age (Ln)	2.98	1.43	0.072	-0.097	0.221**	0.212**	0.208*	0.382**	1		
8.	MT industry	0.37	0.49	0.070	-0.026	0.140	0.014	0.118	0.173*	0.190*	1	
9.	RS industry	0.31	0.46	-0.129	-0.010	-0.035	-0.037	0.076	0.029	-0.094	-0.514**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Note: MT industry = manufacturing and technology industry; RS industry = retail and service industry

The correlations show a significant positive relationship between the average entrepreneurial passion and entrepreneurial orientation. Furthermore, a significant positive relationship has been found

between EO and the three subdimensions of EP (i.e. inventing, founding and developing) with coefficients of 0.293, 0.224 and 0.266 respectively. The generational stage of the family has a significant negative relationship with EO, the average level of EP and all three subdimensions of entrepreneurial passion. Multicollinearity appears not to be an issue as correlation values are lower than 0.8. The variance inflation factor (VIF) was also calculated and showed a maximum VIF value of 1.874, which is far below the recommended cut-off (10).

In the first step, we added control variables to our model. The second step contained the inclusion of entrepreneurial orientation as our dependent variable. Finally, in the third step, we added the generational stage of the family CEO as our moderator variable and took a closer look at the moderating impact on the relationship between EP and EO. In this third phase, we unravelled EP into its three subdimensions and explored the differential outcomes each type of passion might have, resulting in hypotheses 1a, 1b, 1c and hypotheses 2a, 2b and 2c.

Before investigating the moderated regression model, we take a closer look at the first hypotheses. Hypotheses 1a, 1b and 1c explore the specific types of EP and argue that a higher level of EP for inventing, founding and developing respectively have a positive direct effect on the family firm's EO. Hypothesis 1a (Table 2; $\beta = 0.029$, $p < 0.01$), hypothesis 1b (Table 3; $\beta = 0.017$, $p < 0.01$) and hypothesis 1c (Table 4; $\beta = 0.020$, $p < 0.01$) were all supported.

Table 2: Hierarchical regression model EP for inventing

	Step 1	**Step 2**	**Step 3**
Step 1: control variables			
Firm size	-0,1400	-0,1090	0,0705
Firm age	0,1560	0,1410***	0,1284**
MT industry	-0,0470	-0,0530	0,0323
RS industry	-0,0420	0,0150	0,0487
Step 2			
EP (w1)		0,0290***	0,0424***
Step 3: interactions			
EP x Gen CEO 2 (w2)			-0,0116
EP x Gen CEO 3 (w3)			-0,0572**
R^2	0,0580	0,1310	0,1971
ΔR^2		0,0730	0,0661

Notes: MT industry = manufacturing and technology industry; RS industry = retail and service industry; *. p < 0,1; **. p < 0,05; ***. p < 0,01

Hypothesis 2a suggests that the generational stage of the family CEO moderates the relationship between EP for inventing and EO, in such a way that the positive EP-EO relationship is strongest for first-generation family CEO and reduces as the generational stage of the CEO increases. The interaction between EP for inventing and the generational stage of the CEO, as demonstrated in Table 2, showed significant positive effects on the EO of the firm in the first generation ($\beta = 0.0424$, $p < 0.01$). Subsequently, no interaction effect was found for second-generation CEOs ($\beta = -0.0116$, $p > 0.1$). Lastly, the interaction between EP for inventing and the generational stage of the family CEO showed a significant negative effect on the EO of a family firm in the third or later generation ($\beta = -0.0572$, $p < 0.05$). Therefore, this hypothesis was supported.

Table 3: Hierarchical regression model EP for founding

	Step 1	**Step 2**	**Step 3**
Step 1: control variables			
Firm size	-0,1400	-0,0610	0,0618
Firm age	0,1560	0,1550***	0,1467***
MT industry	-0,0470	-0,0590	-0,0268
RS industry	-0,0420	-0,0480	0,0013
Step 2			
EP (w1)		0,0170***	0,0219**
Step 3: interactions			
EP x Gen CEO 2 (w2)			-0,0170
EP x Gen CEO 3 (w3)			-0,0129
R^2	0,0580	0,1090	0,1376
ΔR^2		0,0510	0,0286

Notes: MT industry = manufacturing and technology industry; RS industry = retail and service industry; *. p < 0,1; **. p < 0,05; ***. p < 0,01

Hypothesis 2b subsequently states that the generational stage of the family CEO moderates the relationship between EP for founding and EO, in such a way that the positive EP-EO relationship is strongest for first-generation family CEOs and reduces when the generational stage of the CEO increases. This hypothesis was supported as the interaction between EP for founding and the generational stage of the family CEO showed significant positive effects for first-generation family CEOs ($\beta = 0.0219$, $p < 0.05$). It is interesting, however, that this interaction is noticeably less pronounced in comparison to the other types of entrepreneurial passion. Finally, no moderating effect

was found for second- (β= - 0.0170, p > 0.1), third- or later-generation family CEOs (β= - 0.0129, p > 0.1). These results are shown in Table 3.

Finally, we investigated whether the generational stage of the family CEO moderates the relationship between EP for developing and EO, in such a way that the positive EP-EO relationship is lowest for first-generation family CEOs and increases when the generational stage of the CEO increases (hypothesis 2c). Results, presented in Table 4, reject this hypothesis as the interaction between EP for developing and the generational stage of the family CEO show significant positive effects on the EO for a first-generation family CEO (β= 0.0348, p < 0.01). Conversely, in regard to second-generation family CEOs, no moderation effect was found (β= - 0.0235, p > 0.1). The interaction between EP for developing and the generational stage of the CEO demonstrated a significant negative effect on the EO of the firm for third generation CEOs (β= - 0.0396, p < 0.05).

Table 4: Hierarchical regression model EP for developing

	Step 1	**Step 2**	**Step 3**
Step 1: control variables			
Firm size	-0,1400	-0,1130	0,0082
Firm age	0,1560	0,1240**	0,1282**
MT industry	-0,0470	-0,1070	-0,0683
RS industry	-0,0420	-0,0690	-0,0348
Step 2			
EP (w1)		0,0200***	0,0348***
Step 3: interactions			
EP x Gen CEO 2 (w2)			-0,0235
EP x Gen CEO 3 (w3)			-0,0396**
R^2	0,0580	0,1070	0,1615
ΔR^2		0,0490	0,0545

Notes: MT industry = manufacturing and technology industry; RS industry = retail and service industry; *. p < 0,1; **. p < 0,05; ***. p < 0,01

Robustness testing:

As an additional test of the robustness of our findings, we investigated whether the relationship between the average level of entrepreneurial passion (i.e. a general combination of the three subdimensions) and the entrepreneurial orientation of the family business is moderated by the generational stage of the family CEO. We first used our data to conduct an OLS regression, using the level of average EP as our independent variable and entrepreneurial orientation as our dependent

variable. Our results, depicted in Table 5, confirm that the level of average entrepreneurial passion exhibited by the family CEO significantly impacts the firm-level entrepreneurial orientation. Hereby we first argue that a higher level of EP exhibited by the family CEO directly leads to a higher level of firm-level EO. This is confirmed in table 5 (β= 0.035, p < 0.01), adding to the robustness of our first hypotheses (H1a, H1b, H1c).

Table 5: Hierarchical regression model average EP

	Step 1	**Step 2**	**Step 3**
Step 1: control variables			
Firm size	-0,1400	-0,0570	0,0486
Firm age	0,1560***	0,1310**	0,1219**
MT industry	-0,0470	-0,0920	-0,0295
RS industry	-0,0420	-0,0390	-0,0275
Step 2			
EP (w1)		0,0350***	0,0426***
Step 3: interactions			
EP x Gen CEO 2 (w2)			-0,0113
EP x Gen CEO 3 (w3)			-0,0433*
R^2	0,0580	0,1500	0,1833
ΔR^2		0,0920	0,0333

Notes: MT industry = manufacturing and technology industry; RS industry = retail and service industry; *. p < 0,1; **. p < 0,05; ***. p < 0,01

Second, as shown in Table 5, we added the generational stage of the family CEO as our moderator variable to conduct our moderated regression analysis. We investigated whether the generational stage of the family CEO moderates the relationship between the average level of EP and EO, in such a way that the positive EP-EO relationship is strongest for first-generation family CEOs and reduces when the generational stage of the CEO increases. Table 5 depicts support for this robustness check. The interaction of entrepreneurial passion and the generational stage of the CEO showed significant positive effects on the EO of the firm in the first generation (β= 0.0426, p < 0.01). Next, no moderating effect was found for second-generation (β= - 0.0113, p > 0.1). Finally, in the third generation, the interaction between EP and the generational stage of the CEO showed a significant negative effect on the EO of the family firm (β= - 0.0433, p < 0.05). Common method bias has also been tested using the Hermann single factor test in SPSS. A single factor is extracting 24,227% of

the total and since this is smaller than 50%, we can conclude that there is no track of common method bias (Podsakoff et al., 2003).

Discussion & conclusions

The purpose of this study was to explore the influence of the entrepreneurial passion of family CEO's, unravelled in its three subdimensions, on firm-level entrepreneurial orientation. We incorporated the generational stage of the family CEO as a moderator variable. Concerning hypotheses 1a, 1b and 1c, we suggested that a family CEO's entrepreneurial passion for inventing, founding and developing would have a positive effect on the firm's entrepreneurial orientation. These hypotheses were supported and could be explained by previous research stating that EP for inventing positively relates to innovativeness (Kang et al., 2016). EP for founding positively impacts entrepreneurial persistence (Cardon & Kirk, 2015) and research by Leonelli et al. (2019) later linked entrepreneurial resilience to entrepreneurial persistence and subsequently to entrepreneurial orientation. Finally, according to Campos (2017), EP for developing predicts higher levels of entrepreneurial orientation.

The strength of relationship between EP (i.e. for inventing, founding and developing) and EO can, however, be stronger of weaker when the generational stage of the family CEO is taken into account, hinting at a possible gap. We aim to fill this gap by suggesting the generational stage of the family CEO as our moderator variable. Hypothesis 2a thus stated that the generational stage of the family CEO would influence the relationship between the family CEO's entrepreneurial passion for inventing and the firm's entrepreneurial orientation, in such a way that the positive EP-EO relationship is strongest for first-generation family CEOs and decreases as the generational stage increases. Next, hypothesis 2b similarly suggested that the generational stage of the family CEO would influence the relationship between the family CEO's entrepreneurial passion for founding and the firm's entrepreneurial orientation in such a way that the positive EP-EO relationship is strongest for first-generation family CEOs and decreases as the generational stage increases. Both hypotheses 2a and 2b were confirmed. This could be because the entrepreneurial tasks related to inventing and founding are mainly focused on in the early stages of the business. As the entrepreneurs have a hierarchically dominant identity and disengage from activities that are less meaningful (Cardon et al., 2009), first-generation family CEOs will be superior in converting their passion for inventing and founding into firm-level entrepreneurial orientation.

Finally, we introduced hypothesis 2c, stating that the generational stage of the family CEO would influence the relationship between the family CEO's entrepreneurial passion for developing and the

firm's entrepreneurial orientation, in such a way that the positive EP-EO relationship is lowest for first-generation family CEOs and increases as the generational stage increases. Results conversely show that hypothesis 2c was not supported. A possible reason might be due to a family business' resistance to change (Daovisan & Chamaratana, 2020). As research by Zhao et al. (2018) shows, this resistance to change might occur in the strategic planning. A family firm might therefore hold on to its initial entrepreneurial orientation, as it has led them to good performance so far.

By investigating what impact the generational stage of the family CEO has on the relationship between individual-level entrepreneurial passion and firm-level entrepreneurial orientation, we contribute to family firm literature. First of all, we contribute by investigating the concept of entrepreneurial passion in a family business context. We thereby respond to a future research call by Campos (2017), who suggested exploring the relationship between EP and EO in firms with a different nature (e.g. family businesses). Secondly, our study highlights generational differences in the conversion of entrepreneurial passion into entrepreneurial orientation. Our results show that all three subdimensions of entrepreneurial passion (i.e. passion for inventing, founding and developing) are more easily translated into firm-level EO in the first generation. When the generational stage increases, this moderating impact decreases. This shows that entrepreneurs who are passionate about inventing, founding or developing are able to convert their passion into the entrepreneurial orientation at the onset of the firm. We believe this is due to the fact that the activities related to EP for founding and inventing take place at the establishment of the firm (Cardon et al., 2009). As for EP for developing, we believe that these activities take place once the firm has been established (Cardon et al., 2009). Our results indicate, however, that later generations are not superior in converting their EP for developing into EO. This could be due to the resistance to strategic change that still prevails in family businesses (Zhao et al., 2018). The results of this research have, like any other research, limitations that could offer opportunities for future research. First of all, this study solely used family CEOs as respondents, which significantly reduced the sample size and caused the need to apply targeted sampling. Future research could, however, replicate this present study and incorporate non-family CEOs in their sample to detect potential differentiating effects. This would add value to research regarding the possible advantages and disadvantages of having a family CEO. A second limitation is the timing of our data-gathering phase, as it took place during the COVID-19 pandemic in March and April of 2020. This might have impacted the number of respondents in our sample as well as affected the nature of their responses. Entrepreneurs might, for example, have felt less passionate about entrepreneurship during these uncertain and volatile times.

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