Value Creation in Privately Held Family Businesses: The Moderating Role of Socioemotional Wealth

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Abstract

This article examines value creation (VC) in the context of privately held family businesses using a value-based management approach. Namely, this paper assesses the influence of five value drivers (operating profit margin, sales growth, income tax rate, investment rate, and leverage) on the VC of family firms, considering the moderating effect of socioemotional wealth (SEW). Evidence from a sample of 188 Spanish family firms indicates a positive moderating effect of SEW on the relationship between operating profit margin, sales growth, and investment rate, and VC, leading to increases in the value of firms. The results emphasize that the importance of SEW and its variations imply heterogeneous strategic behaviours among family firms, and that economic and emotional goals might be compatible.

Keywords: value creation, value drivers, value-based management, socioemotional wealth, privately held family businesses

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Introduction

Value creation is essential for firms' survival and consequently the use of value-based management among firms is increasing in both Europe and the United States (Firk, Schrapp, & Wolff, 2016). Value creation (VC) is defined as the increase in value that a business experiences over a strategic period as a result of management decisions (Damodaran, 2002). VC is associated with the decision-making process and occurs when firms invest in projects with returns above the associated cost of capital (Copeland, Koller, & Murrin, 2002; Zellweger, 2017). Value-based management (VBM) can be defined as a holistic managerial approach that puts VC at the centre of the firm's strategy (Copeland et al., 2002; Ittner & Larcker, 2001), affecting simultaneously long- and short-term decision-making (Sharma & Carney, 2012). VBM supports decision-making directed toward the goal of shareholder VC (Burkert & Lueg, 2013). Moreover, based on VBM, VC depends on a set of value drivers, that is, variables which the management can influence and which increase the firms' cash flow. Through management decisions, namely operating, investment, and financing activities (Rappaport, 1986), value drivers enhance firms' value and thus create shareholder value.

Although the VC process has been studied since the final years of the previous century (Rappaport, 1981), it has only been centred on public businesses. It is not until Habbershon, Williams, and MacMillan (2003) that the VC approach was applied to the family-business field. In fact, after their study regarding VC and performance measurements in family firms, greater attention has been paid to this research stream. Accordingly, many scholars have recently stressed the importance of this field by indicating the need for developing new research lines related to VC in family businesses (Mazzi 2011; Sharma & Carney, 2012), arguing that the extant scholarly view on family

firms' VC still remains fragmented (Kammerlander, Sieger, Voordeckers, & Zellweger, 2015).

Most of the existing research dealing with VC in family firms is theoretical, and has focused on how resources should be managed to create value (Sirmon & Hitt, 2003). In spite of the importance and ubiquity of family firms all around the world (La Porta, Lopez-de-Silanes, & Shleifer, 1999), and notwithstanding the increased attention on VBM during the last decade (see for instance Firk et al., 2016), studies empirically assessing VC in family businesses by using this approach are still scarce. Therefore, a more nuanced understanding of VC in private family firms is urgently required (Kammerlander et al., 2015).

Moreover, given that family firms are concerned not only with financial returns but also with noneconomic goals (Martínez-Romero & Rojo-Ramírez, 2017; Zellweger & Astrachan, 2008), management decisions are highly influenced by emotional considerations and socioemotional wealth (Berrone, Cruz, Gómez-Mejia, & Larraza Kintana, 2010; Gómez-Mejia, Haynes, Núñez Nickel, Jacobson, & Moyano Fuentes, 2007; Gómez-Mejia, Cruz, Berrone, & De Castro, 2011). By socioemotional wealth (SEW), Gómez-Mejia et al. (2007) refer to "the non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of family dynasty" (p. 106). Despite the importance attached to emotions in family firms, empirical studies on the influence of emotions in the decision-making process remain scant (Berrone et al., 2012; Vandekerkhof, Steijvers, Hendriks, & Voordeckers, 2015). To the extent that VC is a result of the decision-making process, analyzing how SEW affects businesses' value becomes necessary. Moreover, as emotional concerns have become a key element to consider in business valuation (Zellweger & Dehlen, 2011), it seems impossible to conceive of a study of VC without

considering family firms' SEW.

Bearing in mind the above considerations, the aim of this paper is to deepen our understanding of VC in family firms, and to delve into the VC and SEW relationship to address the following research questions. First, does the VBM approach, namely the VC network, fit for privately held family firms, that is, do management decisions, through value drivers, lead to shareholder VC in family firms? Second, does SEW moderate the expected relationships between value drivers and shareholder VC? That is, how are financial goals measured by VC affected by emotional factors?

We examine our research questions with a sample of 188 Spanish privately held family firms by adopting a design combining a questionnaire and secondary data. Based on VBM, we test how management (operating, investment, and financing) decisions, through value drivers, lead to shareholder VC. Our results suggest that both operating and investment decisions influence firm value and thereby shareholder VC. Subsequently, we analyze how the relationships between value drivers and VC are influenced by SEW. Based on the most essential assumption of VBM, that is, that owners seek to maximize the financial value of their firms (Rappaport, 1986), we argue that SEW exerts a moderating effect on the relationship between value drivers and VC. Our empirical results support our predictions, revealing that for certain values of the moderator, SEW strengthens the relationship between operating value drivers, while SEW weakens the relationship between the investment value driver and VC, leading in all cases to increases in shareholder VC.

This study contributes to the extant literature on VC in family businesses in a twofold manner. First, this is one of the pioneering studies that applies the VBM approach and the VC network (Rappaport, 1986) to analyze VC in privately held family businesses. Second, this study reveals a positive moderating effect of SEW on the relationship between value

drivers and VC, leading to increases in the value of firms. In this vein, our evidence addresses both the call for further research on VC in the family-business field (Kammerlander et al. 2015; Mazzi, 2011) and the call to explore family firms' decisions depending on their degree of SEW (Gómez-Mejia et al., 2011).

The remainder of the article is organized as follows. In the next section, we first review the existing literature about VC in family businesses. Then, the theoretical background is presented. Subsequently, the methodology used is explained. Section four explains the data analysis and the results obtained. Finally, we discuss our findings and formulate our conclusions.

Literature and Hypotheses

VC can be defined from a financial perspective, as the increase in value that a business or firm enjoys during a strategic period as a result of management decisions taken by firm managers or CEOs, and which is considered to be associated with the decision-making process (Damodaran, 2002; Hannus, 2015). Consequently, firms have used the VBM approach to align corporate actions with VC (Firk et al., 2016). VBM supports decision-making directed toward the objective of shareholder VC (Burkert & Lueg, 2013). In this context, a manager's decision creates value if its consequences allow the firm to improve its cash flow and to reduce risks. From a financial perspective, Copeland et al. (2002) and Zellweger (2017) argue that value is created when firms invest in projects with returns above the associated cost of capital.

According to traditional financial valuation theory (Copeland et al., 2002; Penman, 2006), firm value is assessed by using the discounted cash flow model (Rojo-Ramírez & García-Pérez de Lema, 2006), where firm value is considered to be a function of the

amount and timing of future cash flow (Rojo-Ramírez, Martínez-Romero, & Mariño-Garrido, 2018). In this vein, shareholders have a financial interest in the business inasmuch as they invest their financial resources with the intent of raising their investment value and/or obtaining incomes (Haksever, Chaganti, & Cook, 2004). Thus, based on shareholder perspective, it is expected that owners share the objective of VC with VBM and support its implementation (Firk et al., 2016).

Value Creation in Family Businesses

Although the concept of VC has attracted increasing attention in the field of strategic management, only a few studies have been conducted within the family-business context. In prior family-firm literature, theoretical and empirical studies have shown that there are complex arrays of systematic factors affecting strategy processes and firm performance outcomes (Habbershon et al., 2003).

Habbershon et al. (2003) start from a general utility function of VC for family businesses and then move to a more specific wealth creation function for what they called "enterprising families." Focusing on this type of firms, they analyze transgenerational wealth creation and design a unified systems performance model that links resources and capabilities with their potential for transgenerational wealth creation. Since their study, numerous scholars have researched this topic and tried to investigate whether some fundamentals of the family firm, such as ownership and management, have an influence on VC (Chirico & Nordqvist, 2010).

In this context, research has emphasized ownership as being a significant variable that leads to VC. For instance, Pukthuanthong, Walker, and Thiengtham (2012) examine different performance measures to determine whether family ownership creates or destroys value, and conclude that family firms are superior to nonfamily firms with

respect to VC. Hamberg, Fagerland, and Nilsen (2013) corroborate that VC increases with founding-family ownership and show that founding families create significantly more value than long-term non-founding families. Recently, Kammerlander et al. (2015), advocating an integrated perspective, explain how family ownership can create value based on three elements: family firms' goals, resources, and governance. Memili, Fang, and Welsh (2015) reveal generational differences regarding VC and value appropriation among public family firms. Finally, the work of Villalonga and Amit (2006) empirically shows that ownership concentration creates value only when the family-firm founder serves as the CEO, or as the chair with a hired CEO.

In terms of management and organizational composition, Sirmon and Hitt (2003) state that family firms with an effective management of their resources would create value for the business and the family. Moreover, Chirico and Nordqvist (2010) argue that entrepreneurial family businesses are able to foster competitive resource allocation processes leading to VC. Chirico, Nordqvist, Colombo, and Mollona (2012) highlight the importance of understanding the positive and negative determinants of VC in family firms.

Thus, as shown above, the importance of VC in family firms is enhanced from an organizational perspective. However, it would be also rewarding to study VC from a financial valuation perspective (Haksever et al., 2004; Hall, 2012). In this vein, there is a gap in the literature and a need to bring two bodies of literature (family business and financial valuation theory) together into one cohesive explanation of family firms' VC.

Measuring Value Creation

One of the main aspects in the VC process is the integration of a value-based metric that combines the cost of invested capital and a measure of the firm's profitability, and some parameters, the so-called *value drivers* (VDs). Both value-based metric and VDs

are meant to serve as important tools to enhance value-creating strategies (see for instance Copeland et al., 2002). Their impact on competitive advantage through management decisions has generally been reported as being fundamental (Greco Cricelli, & Grimaldi, 2013).

Previous research has focused on how specific accounting techniques, such as the Balanced Scorecard or the Economic Value Added, encourage managers to aim their decisions at creating value for shareholders (Kaplan & Norton, 1992). Furthermore, a proliferation of accounting metrics have emerged as key financial indicators, on which managers can focus on when making decisions. These accounting metrics are the VDs that help managers develop strategies, allocate resources, and set financial targets—that is, to align internal goals with the creation of shareholder value (Firk et al., 2016).

In the VC process, identifying the VDs is understood as being the first step. Then, managers will realize which VDs have the greatest influence on firm value (Hannus, 2015). Since value is based on discounted free cash flow, the underlying VDs have to be the drivers of free cash flow.

Although different firms may have distinct VDs (Hall, 2012), according to Rappaport (1986), VDs can be divided into three groups: operating, investment, and financing VDs.

Regarding the operating group, three VDs are considered: *operating profit margin, sales growth*, and *income tax rate*. The identification of operating VDs provides the advantage of connecting management decisions with such VDs.

First, although the *operating profit margin* has received little attention from scholars (Lento & Sayed, 2015), it is considered to be an income statement measure with better predictive power than other accounting ratios (De Massis, Kotlar, Mazzola, Minola, & Sciascia, 2018). Recent studies suggest that the seasonal difference in operating profit margin is a good tool with which to predict stock returns (Kang, 2004). Moreover,

operating profit margin is relied upon by investors, providing knowledge of firm performance, forecasting revenues and earnings persistence (Lento & Sayed, 2015). Thus, a positive operating profit margin will increase the free cash flow for owners, having a direct impact on VC.

The second VD of this group, *sales growth*, is supposed to be an indicator of firm success. Sales growth draws much attention from managers and investors, revealing how sales have been generated and have changed over time (Kim, Kim, & Gu, 2012). Capon Farley, and Hoening (1990) show that high sales growth is a positive determinant of firm performance, and therefore of firm cash flow. Thus, there is evidence of a positive relationship between an increase in sales and an increase in shareholder value (Lim & Lusch, 2011).

Finally, the *income tax rate* also belongs to this group of VDs, and any operating decision will affect this metric, inasmuch as firms' managers make operating decisions trying to reduce their tax burden by taking advantage of certain tax incentives (Choi & Lee, 2013). Koralun-Bereznicka (2013) contend that differences in value creation among firms might be explained by the multiplicity of taxes that companies are forced to pay. Thus, we postulate a negative relationship between this VD and VC to the extent that the higher the income tax rate is, the less earnings are available for shareholders.

Therefore, based on their effects on cash flow and thus on firm value, operating profit margin and sales growth will increase created value while the income tax rate will decrease that value. Stated formally:

H1: Operating profit margin and sales growth lead to an increase in shareholder value creation while income tax rate leads to a decrease in shareholder value creation.

With respect to investment VDs, there are metrics, such as required investments in fixed assets and in working capital, that are affected by decisions such as increasing the inventory level or production capacity. It is argued that these types of decisions will influence shareholder VC. Not only should these types of decisions create value in the firm, but they should also appropriate value (Memili et al., 2015). This claim results in our baseline expectation that investment rate serves to understand the extent to which tangible and intangible assets could be sources of competitive advantage (Greco et al., 2013).

Strategic investment decisions are made with the expectation of an increase in future cash flow. Nevertheless, when investment decisions are made, they imply negative cash flow, because a substantial amount of cash will be sacrificed to the owners in the initial moment, which reduces firm value (Penman, 2006; Zellweger, 2017). Therefore, to the extent that investment decisions reduce cash flow when they are made, they are not value-maximizing from the firm's perspective (Block, 2012). Stated formally:

H2: The investment rate leads to a decrease in shareholder value creation.

Finally, financing decisions are one of the main business decisions that also have an impact on firm performance.

In practice, firms use a combination of internal and external financial resources, and the impact of the capital structure on shareholder VC still remains unclear. In fact, the pecking order theory (Myers & Majluf, 1984) and the static trade-off theory (Titman, 1984) found contradictory predictions in this respect. On the one hand, the static trade-off theory states that a target debt–equity ratio exists that maximizes firm value and

consequently shareholder VC. On the other hand, the pecking order theory states that this ratio does not exist and that the increase in debt fuels bankruptcy costs, which has a negative impact on shareholder VC.

Thus, and taking into consideration the free cash flow model, we state that there is a negative relationship between the indebtedness of a firm and shareholder VC, because cash for shareholders will be reduced due to the debt.

H3: The level of indebtedness leads to a decrease in the shareholder value creation.

The Influence of Socioemotional Wealth on Value Creation

Many studies suggest that family-firm decision-making differs from that of nonfamily firms due to the prioritizing of non-economic goals over purely financial objectives (Gómez-Mejia et al., 2007; Rojo-Ramírez & Martínez-Romero, 2018). Up to now, it has been commonly acknowledged that non-economic goals are achieved at the expense of financial gain (Chrisman & Patel, 2012). However, recent studies (see for instance Martin & Gómez-Mejia, 2016; Martínez-Romero & Rojo-Ramírez, 2016; 2017) highlight the existence of certain positive relationships between financial and emotional objectives when family firms pursue financial goals through the increase of SEW. Thus, when there is an alignment between financial and emotional objectives, SEW might contribute to VC through VDs. Accordingly, some elements of SEW, such as long-term orientation, tacit knowledge, patient capital, and greater commitment to the firm (Sirmon & Hitt, 2003) foster the achievement of financial objectives and thus VC. That is, family firms with higher SEW are endowed with superior tacit knowledge due to the unique capabilities they have developed relating to the various routines, the know-how, and the resources of their businesses. Moreover, firms with higher SEW are also characterized by

their long-term orientation and patient capital (Gersick, Davis, Hampton, & Lansberg, 1997), which also contribute to improving performance outcomes.

To summarize, family firms' strategic decision-making will take into account both emotional and financial factors to achieve an alignment between economic and noneconomic goals. Thus, operating, financing, and investment decisions are reached considering the abovementioned elements with the ultimate intention of creating value for shareholders. Specifically, SEW may strengthen VC by reinforcing the positive effect of sales growth and the operating profit margin on the created value, and by weakening the negative effect of the income tax rate, investment rate, and leverage on VC, leading in all cases to a higher shareholder VC. Thereby, we argue that SEW acts as a moderator in the relationship between VDs and VC. Stated formally:

H4: SEW moderates the relationships between value drivers and VC. Specifically, the positive relationships between (a) operating profit margin, and (b) sales growth and VC are strengthened at higher levels of SEW; meanwhile, the negative relationships between (c) income tax rate, (d) investment rate, and (d) leverage and VC are mitigated at higher levels of SEW.

Methodology

Dataset

To test our hypotheses, data were collected in two waves. In the first wave, we gathered archival economic and financial data from the Sistema de Análisis de Balances Ibéricos (SABI) database. Thus, data of privately held businesses employing at least three full-time employees were selected for a 10-year period (2004 to 2013). We restricted the

potential sample to those firms with minimum revenues of 100,000 euros per year for the analyzed period, to ensure continuous business activity. Moreover, to ensure a sample of potential family businesses, the statistical classification of economic activities in the European Community, known as NACE, was used. All 2009 NACE codes were included[1] . As a result, our initial sample consisted of 1,899 potential family firms.

Firms from the SABI were classified following three criteria: legal nature, ownership concentration, and lone founder or family involvement in ownership. As the SABI database does not contain information on whether firms are family firms or not, we follow the proposal of Diéguez-Soto, López-Delgado, and Rojo-Ramírez (2015) for identifying family businesses. Taking advantage of the Spanish custom of giving children two surnames, one from each parent, we compared the surnames of all of the internal stakeholders (shareholders, CEO and directors of the firm) involved in the management and governance of the business and, depending on the match between the surnames, businesses were classified as family firms or not.

After applying this process, we had a final sample comprising 1,441 family businesses.

In the second wave, in 2013, we collected primary data relating to SEW with questionnaires. That is, a questionnaire was mailed to the CEO of these 1,441 firms in order to compile the emotional information. Due to the scarcity of data obtained when questionnaires were sent by email, telephone calls were made to talk directly to the firms' CEOs. In this manner, we obtained complete responses from 224 family firms (a 15.54% response rate). After reducing our sample by eliminating missing values with regard to our main variables and by trimming outliers at a 1% level, a sample of 188 family firms

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[1] We excluded the following: Financial Services except insurance and pension funding; Insurance, reinsurance, and pension funding, except compulsory social security; Auxiliary activities to financial services and insurances; Partnership activities; Other personal services; and Extraterritorial organizations' activities

remained.

A key informant approach was employed, with the family firm CEO the contact person in the business. Finally, to make absolutely certain that the firms in the sample were family firms, we verified this by asking them directly whether they identified themselves as family firms (Westhead & Cowling, 1998).

To mitigate concerns pertaining to nonresponse bias, we compared the data obtained from respondents versus non-respondents using a *t*-test to compare means. The results revealed no significant differences for any of the variables. By using both primary and secondary sources of data, the risk of common method bias was also mitigated (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We employed different techniques to analyze the possibility of multicollinearity, heteroscedasticity, and common method bias for our sample. First, we found no indications of multicollinearity based on the values of the correlation matrix (Table 1). We also computed the Variance Inflation Factor (VIF) to ensure that multicollinearity was not a concern (Belsley, Kuh, & Welsch, 1980). Second, we found no indications of heteroscedasticity so that, according to the plot of standardized residuals against predicted value, the assumptions of homoscedasticity and linearity were met.

Variables

Dependent variable. The dependent variable is *value creation* (VC), which is measured following the proposal of Copeland et al. (2002) and Koller, Goedhart, and Wessels (2010). These authors state that firms create value by investing in capital at rates of return that exceed their costs of capital. Thus, the created value might be calculated as the difference between Return on Equity (*ROE*) and its associated cost of capital, that is, the cost of equity capital (k_e), as shown in expression 1:

$$VC_t = ROE_t - ke_t \qquad \text{(Expression 1)}$$

Following De Massis et al. (2018) and Sciascia, Mazzola, and Kellermanns (2014), we considered the average VC values from 2004 to 2013 to generate our final value. To achieve a more normal distribution, we used the natural logarithm of VC (Tabachnick & Fidell, 1996). In line with Cruz, Larraza-Kintana, Garcés-Galdeano, and Berrone (2014), to avoid problems with the log transformation of negative values, we added 1 to all original VC values before calculating the logarithm.

Independent variables. We used five *VDs* as independent variables: operating profit margin (*Margin*), sales growth rate (*Salesgrowth*), income tax rate (*IncTaxRate*), investment rate (*InvRate*), and leverage (*Lev*). We considered the average historical value from 2004 to 2013 of each independent variable.

Operating profit margin is calculated as EBITDA at the end of the year t scaled by revenues at the end of that year (Koralun-Bereznicka, 2013).

Sales growth in year t is measured as $(Sales_t - Sales_{t-1})/Sales_{t-1}$ (Barbera & Hasso, 2013) where "Sales" indicates the nominal euro value of total annual sales generated for the financial year.

Income tax rate is measured as the total expense for income taxes scaled by pre-tax income (Mafrolla & D'Amico, 2016). Then, the variable 1 minus income tax rate was used.

The investment rate is measured as $(Investment_t - Investment_{t-1})/(Sales_t - Sales_{t-1})$ (Waldron 2010), where "Investment" is the net investment in both fixed assets and working capital, and "Sales" indicates the nominal euro value of total annual sales generated for the financial year t.

Leverage is computed as the ratio of debt to equity (Martínez-Romero & Rojo-Ramírez, 2017).

Moderating variable. In line with recent studies (for instance Kraus, Mensching, Calabrò, Cheng, & Filser, 2016), we measured the variable SEW following the proposal of Berrone et al. (2012), who identified five SEW dimensions, that is, Family control and influence, Identification of family members with the firm, Binding social ties, Emotional attachment of family members, and Renewal of family bonds through dynastic succession. Thus, we measured each dimension using a five-point Likert scale (Martínez-Romero & Rojo-Ramírez, 2017). Then, the obtained values for each dimension were added to calculate the final variable used. The Cronbach's alpha reliability coefficient of the SEW scale was found to be 0.75.

Control variables. Some control variables similar to those used in other family-firm performance studies (see Cruz, Justo, & De Castro, 2012; Sciascia et al., 2014) were used to assure proper model specification. First, we controlled for *firm age* using the number of years the firm has been in existence, since the date of incorporation of the firm up to the last year of this study (2013). *Lnage* was computed by the natural logarithm of firm age measured in years (Berrone et al., 2010). Second, firm size was measured by the number of employees (Hauck & Prügl, 2015). We also controlled for the family nature of the CEO *(Family CEO)*, because different authors (see for instance Berrone et al., 2010; 2012) argue that family CEOs have a positive impact on firms' outcomes, Finally, because the created value might be different depending on the industry in which firms operate, we also included two dummy variables (*CON*, *WHO*) that allow for three major business lines to be differentiated: construction, wholesale and retail, or other sectors of the economy.

Model

In this study, we used an ordinary least squares regression (OLS) to analyze the

effects of VDs on VC, calculated as the spread of ROE minus k_e. Moreover, we used interaction models to test the moderating effect of SEW on the relationship between VDs and the VC.

The interaction models have acquired great importance during the last years, being used to analyze different family-firm characteristics (see for instance Kellermanns, Eddleston, Sarathy, & Murphy, 2012a).

As indicated by Schepers, Voordeckers, Steijvers, and Laveren (2014) and Vandekerkhof et al. (2015), based on Brambor, Clark, and Golder (2006), in an interactive model, the effect of any independent variable X on the dependent variable Y is not any single constant. The effect of an independent variable (X) on the dependent variable (Y) depends on the coefficients (betas) of X and of the interaction term XZ, as well as on the value of the moderating variable (Z).

In this vein, it is of great importance to analyze the marginal effect of each independent variable with respect to the dependent variable, to the extent that it is perfectly possible that these effects are significant for relevant values of the moderating variable, even in the case of insignificant coefficients of the interaction term (Brambor et al., 2006).

Indeed, the significance of the interaction term is not our main concern. What we really want to check is whether the marginal effect of each value driver remains positive (in the case of operating profit margin and sales growth) or negative (in the case of tax rate, investment rate, and leverage) once the importance of SEW increases.

Therefore, assuming a simplified model with an independent variable X_1, a moderating variable Z, and the interaction term X_1Z, we can derive the marginal effect of X_1:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 Z + \beta_3 X_1 Z + \cdots + \epsilon, \text{ and the marginal effect} = \frac{\partial Y}{\partial X_1} = \beta_1 + $$

$\beta_3 Z$

Thus, the effect of X₁ on Y depends on β₁, β₃, and the value of the moderating variable Z. For certain ranges of values of the moderator Z, the marginal effect of X₁ can be significant even when the coefficient of the interaction term β₃ is insignificant. This can be tested by examining a plot of $\frac{\partial Y}{\partial X_1}$ and its 95% confidence interval over the range of Z in the sample to check if X and Y are statistically related (at that value of Z), with the substantive significance of the relationship given by the direction and magnitude of the $\frac{\partial Y}{\partial X_1}$ estimate.

Taking everything into consideration, we propose the following model:

$Value\ Creation$

$$= \beta_0 + \beta_1 SEW + \beta_2 Margin + \beta_3 Salesgrowth + \beta_4 IncTaxRate$$

$$+ \beta_5 InvRate + \beta_6 Lev + \beta_{12}(SEW \times Margin)$$

$$+ \beta_{13}(SEW \times Salesgrowth)$$

$$+ \beta_{14}(SEW$$

$$\times IncTaxRate) + \beta_{13}(SEW \times InvRate) + \beta_{14}(SEW \times Lev)$$

$$+ \beta_7 FAge + \beta_8 FSize + \beta_9 Con + \beta_{10} Whole + \beta_{10} FamCEO + \epsilon$$

Data Analysis and Results

The means, standard deviations, and correlations are shown in Table 1. The correlation matrix shows that operating profit margin and sales growth are positively related to VC, while tax rate, investment rate, and leverage are negatively related to VC. The SEW is negatively correlated with VC.

[Insert Table 1]

The hypotheses proposed in the research model were tested using hierarchical regression analysis. Table 2 displays the results of the OLS regression analysis, with measures of VC as the dependent variable.

[Insert Table 2]

Model 1 tests whether the VDs, namely operating, investment, and financing VDs, have a significant effect on VC. First, concerning operating profit margin, our findings indicate that this value driver has a significant positive impact ($\beta = 1.27$; $p < 0.01$) on VC. Sales growth has a positive and significant effect on VC ($\beta = 0.507$; $p < 0.1$). The value driver of tax rate exerts a negative but insignificant impact on VC. These findings partially support *H1*. Moreover, the investment rate has a negative and significant impact on VC ($\beta = -0.014$; $p < 0.01$), which supports *H2*. What is more, leverage has no impact on VC. Furthermore, our findings reveal that firm age is negatively and significantly related to VC ($\beta = -0.411$; $p<0.01$), suggesting that younger family businesses create more value than older businesses. On the contrary, firm size is positively related to VC. Finally, the fact of having a family CEO has a negative and significant effect on VC ($\beta = -0.238$; $p < 0.05$). Moreover, the adjusted R^2 is 0.263, and the model is significant ($p < 0.001$).

Then, in Models 2, 3, and 4 of Table 2, we test the moderating effect of SEW on the relationship between VDs and VC. Regarding operating VDs, we only integrate the interaction between operating profit margin and SEW, and between sales growth and SEW, because only these measures were significantly related to VC. Accordingly, neither was the interaction included between the financing VD and SEW.

Models 2, 3, and 4 show the same relationships between the dependent variable and the VDs that were observed in previous models. In neither of these models is the interaction term statistically significant. However, as explained above, our main objective is not to investigate whether the coefficients of our interaction terms are significant. Instead, we want to know if the marginal effect of each value driver remains positive (or negative) once the importance of SEW preservation increases.

Therefore, the calculation of marginal effects is of great importance to correctly interpret these moderating effects. Not only is it necessary to consider the coefficient of the interaction term to capture the total effect, but also the value of the moderating variable SEW and the coefficient of each value driver (Brambor et al., 2006). We therefore calculated the derivative of regression Model 2 (∂ VC/∂ Operating Profit Margin= $\beta_2 + \beta_{12}SEW$), Model 3 (∂ VC/∂ Sales growth= $\beta_3 + \beta_{13}SEW$), and Model 4 (∂ VC/∂ Investment rate= $\beta_5 + \beta_{15}SEW$). There is no other way to deduce this information than to calculate the derivative for several relevant ranges of values of SEW (Brambor et al., 2006). We found that, for certain ranges of values of SEW, this variable exerts a moderating effect on the relationship between operating profit margin, sales growth and investment rate, and VC.

Thus, for the case of Model 2, Figure 1 shows the graphic illustration of the marginal effect of operating profit margin on VC for different levels of SEW, illustrated by the solid line. The dotted lines represent the 95% confidence interval. This effect is significant when both the upper and lower bounds of the confidence interval are above (or below) the zero line, which allows us to determine the conditions under which operating profit margin has a positive and statistically significant effect on VC. This occurs when SEW ranges between 19.6 and 25, which represents 72.34% of the total sample.

Figure 1 reflects that the positive effect of operating profit margin on VC increases as SEW reaches higher values. That is to say, when SEW becomes primordial in family firms, family owners will seek to maximize shareholder VC above any other objective. Therefore, Figure 1 reflects that, as the emotional endowment presented in family firms increases, the positive marginal effect of operating profit margin on VC is strengthened.

[Insert Figure 1]

In Model 3 of Table 2, we also investigate the moderating effect of SEW on the relationship between sales growth and VC. Figure 2 shows that sales growth rate has a significant positive effect on VC as long as SEW is high (above the median value of 21, which encompasses about 51.59% of the total sample). This positive effect is found to be strengthened (the slope is positive) when SEW increases. Again, for high values of SEW, the moderating effect of SEW reinforces VC. In Model 4 of Table 2, the moderating effect of SEW on the relationship between investment rate and VC was also investigated. As stated above, in this case, the interaction term is not significant at a 95% level. Nevertheless, after calculating the derivative of regression Model 4 (∂ VC/∂ Investment rate= $\beta_2 + \beta_{16}SEW$), Figure 3 indicates that SEW does act as a moderator when it takes values between 18.5 and 24.35, which encompasses 79.26% of the sampled family firms. In these cases, the negative marginal effect of investment rate on VC decreases (positive slope) when the emotional endowment increases, leading to a major VC.

Thereby our findings support *H4a*, *H4b*, and *H4d*.

[Insert Figures 2 and 3]

Robustness Tests

We also executed additional robustness test. First, we calculated a proxy of VC by estimating a binary variable, that is, the likelihood of creating value (VC_d), which equals one when the firm has created value (that is, when the spread $ROE-k_e$ is positive), and zero if the firm has not (that is, when the spread $ROE-k_e$ is negative). In this case, we also used an interaction model to test the moderating effect of SEW on the relationship between VDs and VC_d.

As shown in Table 3, the behaviour of independent variables coefficients is the same as in the OLS regression analyses in all models. All models were significant with acceptable values of the Nagelkerke pseudo R^2 (Nagelkerke $R^2 > 0.319$).

[Insert Table 3]

Our findings reveal the same interaction effects between operating profit margin and SEW, and between sales growth and SEW. The analyses of marginal effects are comparable to the results presented in Figure 1 and Figure 2 (figures not reported), which provide further support for the results of our study. Nevertheless, when using the proxy for VC, we did not find any range of values for which the effect of SEW has an impact on the relationship between investment rate and VC_d.

Discussion and Conclusions

Our study is motivated by the call for more comprehensive research on VBM (Ittner & Larcker, 2001) and on VC in the family-business field (Kammerlander et al., 2015; Mazzi, 2011). Thus far, the VBM approach has been applied to public firms (see Firk et al., 2016) and the empirical research analysing VC in family firms is still scarce (Memili

et al. 2015). In particular, research has not yet empirically investigated the VBM, specifically the VC network (Rappaport, 1986), in the context of private family firms. In this vein, the VBM approach has been partly neglected in the family business field inasmuch as agency conflicts between free float shareholders and managers are unlikely in this type of businesses (Brück, Ludwig, & Schwering, 2018). However, other type of agency conflicts could arise in family firms, increasing the need for VBM approaches: conflicts of interest resulting from altruism and self-control (Schulze, Lubatkin, & Dino, 2003); conflicts derived from the CEO selection when the family firm is in an advanced stage (Brück et al., 2018); or the ability of majority family shareholders to extract private benefits at the expense of minority family shareholders (Claessens, Djankov, Fan, & Lang, 2002). Furthermore, Michiels, Voordeckers, Lybaert, and Steijvers (2014) revealed that the intra-familial principal–principal conflict (Gersick et al., 1997) is a relevant agency problem in private family firms, showing the differences between active and passive family shareholders. Moreover, the greater control exerted by some family members leads to the generation of private benefits of control that are not shared by minority family shareholders (Shleifer & Vishny, 1986). Accordingly, in these contexts, VBM is an effective theoretical lens through which to study agency problems in private family firms, which can help enhance decision-making quality by allowing consistent and goal-congruent decision support and performance measurement (Brück et al., 2018).

Therefore, the aim of the present study is to explore how the VBM approach (Burkert & Lueg, 2013; Ittner & Larcker, 2001) and the VC network (Rappaport, 1986) fit for privately held family firms. We analyzed how VDs through management decisions create value in private family firms. A further aim was to analyze to what extent the emotional endowment of family firms, namely their SEW, moderates the expected relationships between VDs and VC.

The regression analysis partially confirms *H1* and supports *H2*, as we found that operating profit margin and sales growth have a significantly positive impact on VC, while investment rate has a significant negative impact on VC. Furthermore, we found that when SEW ranges between 19.6 and 25, it positively moderates the positive relation between operating profit margin and VC. When SEW is above the median value of 21, it strengthens the positive relationship between sales growth and VC. Finally, our findings reveal that SEW positively moderates the negative relation between investment rate and VC when it takes values between 18.5 and 24.35.

The fact that *H1* and *H2* behaved as we expected indicates that the VBM and the VC network can be applied in private family firms. First, regarding operating decisions, our findings are in accordance with the framework proposed by Rappaport (1986) and previous research related to operating VDs (Capon et al., 1990; Lento & Sayed, 2015). However, in line with Koralun-Bereznicka (2013), our results did not support the effect of tax rate on VC. Thus, family-firm managers could increase the value of their firms by controlling operating VDs such as operating profit margin and sales growth. Second, with respect to investment decisions, our findings reinforce the relevance of managers' investment criteria. In this sense, our results are consistent with Rappaport's framework and supported by the traditional financial valuation theory (Copeland et al., 2002; Penman, 2006), where investments decisions will reduce owners' free cash flow due to the decrease of flow at the time of the investment. Finally, our results offer little evidence in regard to financing decisions because the relationship between financing VDs and VC is not statistically significant.

With respect to the effect SEW exerts on management decisions through VDs, our findings reveal interesting insights. As previously explained, we found that SEW moderates the relationships between certain VDs, that is, operating profit margin, sales

growth, and investment rate, and VC, but only at high values of SEW. That is, SEW strengthens the positive relationships between operating VDs and VC, and weakens the negative relation between investment rate and VC, leading to increases in VC. Therefore, higher levels of SEW involve major shareholder VC. These findings reveal that emotional objectives might be beneficial for the achievement of financial goals.

Traditionally, emotions have been thought to outweigh rational considerations in decision-making processes in family firms, leading to inefficiency in firm outcomes. Some studies highlight how resources are inefficiently used in family firms due to their desire for SEW preservation (Cruz et al., 2012; Gómez-Mejia et al., 2011). For example, Schepers et al. (2014) demonstrate that SEW hampers the transmission of entrepreneurial orientation into financial objectives. Vandekerkhof et al. (2015) also find that the positive effect of organizational characteristics on the integration of nonfamily managers decreases when SEW becomes very important for family members. In this regard, recent literature has argued that SEW has a bright side and a dark side (Kellermanns, Eddleston, & Zellweger, 2012b), which can lead to both favourable and unfavourable firm outcomes and thereby to VC or value destruction within the family firm (Kammerlander et al., 2015).

Nevertheless, pursuing utility from non-economic goals does not necessary lead to inefficiency (Jensen & Meckling, 1994), neither destroy economic value (Zellweger & Nason, 2008). In fact, there are some situations in which family goals and economic goals tend to converge (Chrisman & Patel, 2012). In line with the above, Stockmans, Lybaert, and Voordeckers (2010) argue, "only when preserving the family's socioemotional wealth is at the expense of the interests of other stakeholders of the family [. . .] problems may emerge" (p. 282). Therefore, if the preservation of SEW is not at the expense of other nonfamily members, it should not be translated into inefficiency and thus into worse financial outcomes. Shareholder VC therefore does not have to involve economic

inefficiency. Moreover, a recent paper of Kammerlander and Ganter (2014) recognize that some non-economic goals might be beneficial for the achievement of economic objectives. These authors state that in certain situations, economic and non-economic goals might well be aligned and mutually reinforced. In the same vein, Martin and Gómez-Mejia (2016) acknowledge a two-way relationship between socioemotional and financial forms of wealth. In any case, ineffective management behaviour destroys value for all stakeholders (Haksever et al., 2004), including family shareholders. Thus, in order to ensure the success and survival of the firm, emotional and economic goals should move in the same direction.

Contributions

The present study contributes to theory testing (Colquitt & Zapata-Phelan, 2007) by examining a previously unexplored relationship in the context of privately held family businesses, namely the link between VDs and VC. Moreover, our study introduces a substantive moderator, that is, SEW, in order to describe when and under what conditions the aforementioned relationships are demonstrated. Our article contributes to the literature in several ways.

First, to the best of our knowledge there are no previous studies applying the VBM approach (Ittner & Larcker, 2001) and specifically the VC network (Rappaport, 1986) in the context of private family businesses. Thus far, previous literature on these topics is still scant (Brück et al., 2018; Memili et al., 2015). In this regard, our study highlights the relevance of VBM as a theoretical lens to study agency problems in private family firms and its usefulness to improve decision-making quality by enabling goal-congruent decision support and performance measurement. By focusing our analysis on privately held family businesses, which account for the vast majority of firms around the world (La

Porta et al., 1999), we answer the call for further research on VC in family businesses (Kammerlander et al., 2015; Mazzi, 2011).

Second, our findings reveal a positive moderating effect of SEW on the relationship between VDs and VC. Namely, the positive relationship between both operating profit margin and sales growth and VC is strengthened, and the negative relationship between investment rate and VC is weakened, leading in all cases to increases in firm value, and thereby to VC. Thus, in our study, we found that emotional considerations, measured by SEW, do not imply lower performance levels; just the contrary: emotional considerations are aligned with financial objectives (Zellweger & Nason, 2008). Our outcomes support the idea that emotional considerations might contribute perfectly to the achievement of financial goals. Our study thereby also addresses Gómez-Mejia et al.'s (2011) call to explore the decisions taken by family firms depending on their degree of SEW (Debicki, Kellermanns, Chrisman, Pearson, & Spencer, 2016), allowing us to investigate heterogeneity among family firms (Chrisman, Chua, Pearson, & Barnett, 2012).

Third, and related to the abovementioned considerations, we combined a financial and an emotional perspective. While it is true that many researchers have related the SEW approach to financial considerations (see Cruz et al., 2012) no study has analyzed VC from an emotional perspective in the context of privately held family firms. From our point of view, it is important to highlight these relationships because it has never before been demonstrated in the family-business field that such an interconnection between emotional and financial business considerations exists, measured by SEW and VC respectively; we found empirical support for these relationships.

Fourth, following the example of recently published studies (Kraus et al., 2016; Martínez-Romero & Rojo-Ramírez, 2017) we measured SEW directly and not using a proxy, such as family ownership and/or family management, as previous research has

done (Diéguez-Soto, Manzaneque-Lizano, & Rojo-Ramírez, 2016; Gómez-Mejia et al., 2007).

Limitations and Future Research

In spite of the interesting results of this study, our research has some limitations that also provide interesting avenues for future research.

First, we performed our analysis for firms located in the south of Spain, so we must confirm whether our findings could be extrapolated to other regions. Namely, variables such as income tax rate or investment rate might well be dependent on the localization of the businesses because they might take on different values according to the fiscal or market conditions of the country concerned. Thus, studies analyzing the issues we have addressed here but in other countries would advance this area of knowledge.

Second, created value might be influenced by environmental factors or by market forces. Although we controlled for industry effects, it would be interesting to improve the understanding of environmental circumstances on VC. Thus, studies in other economic conditions (economic growth or economic decline) or taking into account industry characteristics (such as volatility, profitability, and so on) could be developed.

Finally, we used a cross-sectional design for our study. Although cross-sectional designs are currently standard practice (De Massis et al., 2018; Martínez-Romero & Rojo-Ramírez, 2017; Vandekerkhof et al., 2015), claims about causality cannot be sustained with this method. However, the use of an averaged value of the dependent variable over time further ensures that the direction of causality is from VDs to VC and that reversed causality can be ruled out.

Managerial Implications

Our findings could also have practical implications to the extent that they have some important managerial implications. As we have demonstrated, VC in family businesses shall be conditioned upon the SEW presented in this type of firm. Thus, it is important for family businesses to learn how to manage their emotional endowment to derive the most advantage from it. Thus, if we know that having a high SEW contributes to increasing created value, we can manage the emotional endowment of our businesses to maximize created value. Therefore, it is of great importance for family firms to learn how to manage the emotions between their members to achieve the best results. In this vein, there should be a balance between the rational and the emotional endowments of family firms.

In conclusion, the findings of our study suggest that operating profit margin, sales growth, and investment rate, have an impact on the VC of privately held family businesses. Moreover, our results suggest that the SEW presented in these types of firms acts as a moderator on the relationships between the abovementioned VDs and the created value, leading to higher VC. These results highlight how the emotional endowment of family firms affects management decisions, which in turn influence financial outcomes.

JEL classification: G31, G32, L21, L25

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Table 1

Descriptive statistics and pairwise correlations

	Mean	ST	1	2	3	4	5	6	7	8	9	10	11	12
1. Value creation	0.169	0.492	1											
2. Operating profit margin	0.053	0.115	0.291**	1										
3. Sales growth	-0.33	0.116	0.22**	0.126*	1									
4. Tax rate	0.741	0.198	-0.046	0.044	0.014	1								
5. Investment rate	1.253	9.574	-0.2**	0.036	0.001	-0.012	1							
6. Leverage	41.408	114.296	-0.129*	-0.212**	-0.077	-0.165*	0.211**	1						
7. SEW	21.088	2.618	-0.162	-0.004	-0.056	-0.042	0.037	-0.01	1					
8. Firm age	30.085	0.305	-0.203**	0.078	-0.052	0.045	-0.116†	-0.171*	0.012	1				
9. Firm size	24.48	51.354	0.046	0.024	-0.018	-0.012	0.144*	-0.106†	-0.13*	0.099†	1			
10. Construction	0.17	0.377	-0.177**	0.029	-0.264**	0.07	-0.152*	-0.057	0.088	0.086	-0.031	1		
11. Wholesale & retail	0.44	0.498	0.006	-0.112†	0.013	-0.083	0.086	-0.084	-0.096†	-0.089	-0.083	-0.403**	1	
12. Family CEO	0.745	0.437	-0.011*	-0.164*	0.011	-0.07**	-0.012**	0.185**	0.092	-0.017	-0.082	-0.157*	0.103†	1

Note. N=188; SEW = Socioemotional wealth.

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$

Table 2

The effect of value drivers on value creation: ordinary least squares regression results

Model	1	2	3	4
Constant	1.495** (0.355)	1.572** (0.412)	1.568** (0.437)	1.48** (0.414)
Operating profit margin	1.27** (0.291)	1.185** (0.429)	1.302** (0.458)	1.261** (0.464)
Sales growth	0.507† (0.29)	0.553† (0.408)	0.518† (0.408)	0.474 (0.438)
Tax rate	-0.124 (0.163)	-0.129 (0.308)	-0.153 (0.31)	-0.139 (0.319)
Investment rate	-0.014** (0.004)	-0.014** (0.005)	-0.014* (0.005)	-0.014† (0.003)
Leverage	0 (0)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
SEW		-0.019† (0.011)	-0.023† (0.012)	-0.043† (0.012)
Control variables				
Firm age	-0.411** (0.107)	-0.404** (0.119)	-0.435** (0.129)	-0.409** (0.125)
Firm size	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Family CEO	-0.238* (0.098)	-0.215† (0.115)	-0.207† (0.118)	-0.23† (0.118)
Construction[a]	-0.038 (0.072)	-0.042 (0.072)	-0.047 (0.082)	-0.054 (0.082)
Wholesale	0.021 (0.076)	0.032 (0.056)	0.033 (0.057)	0.037 (0.057)
Interaction effects				
SEW*Margin		0.313 (0.265)		
SEW*Sales growth			0.217 (0.154)	
SEW* Investment Rate				0.001 (0.003)
Adjusted R^2	0.263	0.306	0.292	0.28
F statistics	6.33**	2.909**	2.853**	2.83**

Note. N=188; SEW= socioemotional wealth; dependent variable = value creation; robust standard errors in parentheses.
a. Other sectors of the economy constitute the suppressed category. † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$

Table 3

The effect of value drivers on value creation: logistic regression results

Model	1	2	3
Constant	7.021^{**} (2.012)	5.967^{**} (1.872)	5.635^{**} (1.829)
Operating profit margin	9.69^{**} (2.503)	9.293^{**} (2.476)	8.811^{**} (2.365)
Sales growth	6.367^{**} (1.772)	5.87^{**} (1.723)	5.709^{**} (1.715)
Investment rate	$-0.029^{\dagger}$ (0.019)	$-0.031^{\dagger}$ (0.018)	$-0.032^{\dagger}$ (0.021)
SEW	0.052 (0.068)	0.012 (0.065)	0.01 (0.065)
Control variables			
Firm age	-2.242^{**} (0.689)	-2.068^{**} (0.642)	-1.879^{**} (0.623)
Firm size	$0.367^{\dagger}$ (0.189)	$0.331^{\dagger}$ (0.185)	0.33 (0.187)
Family CEO	-0.263 (0.098)	-0.251^{**} (0.412)	$-0.254^{\dagger}$ (0.411)
Construction	-0.142 (0.512)	-0.097 (0.511)	-0.251 (0.498)
Wholesale	0.277 (0.388)	0.257 (0.389)	0.154 (0.388)
Interaction effects			
SEW*Margin	2.13^{**} (0.822)		
SEW* Sales growth		1.053 (0.754)	
SEW* Investment rate			0.004 (0.009)
Cox and Snell R^2	0.254	0.237	0.231
Nagelkerke R^2	0.352	0.329	0.319
McFadden R^2	0.229	0.211	0.204

Note. N = 188; SEW = socioemotional wealth; dependent variable = dummy variable with a value 1 if the family firm creates value, 0 otherwise; robust standard errors in parentheses.

a. Other sectors of the economy constitute the suppressed category. † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$

Figure 1. Marginal effect of operating profit margin on value creation as socioemotional wealth changes

Marginal effect of margin as SEW changes
Dependent variable: value creation

Figure 2. Marginal effect of sales growth on value creation as socioemotional wealth changes

Marginal effect of sales growth as SEW changes
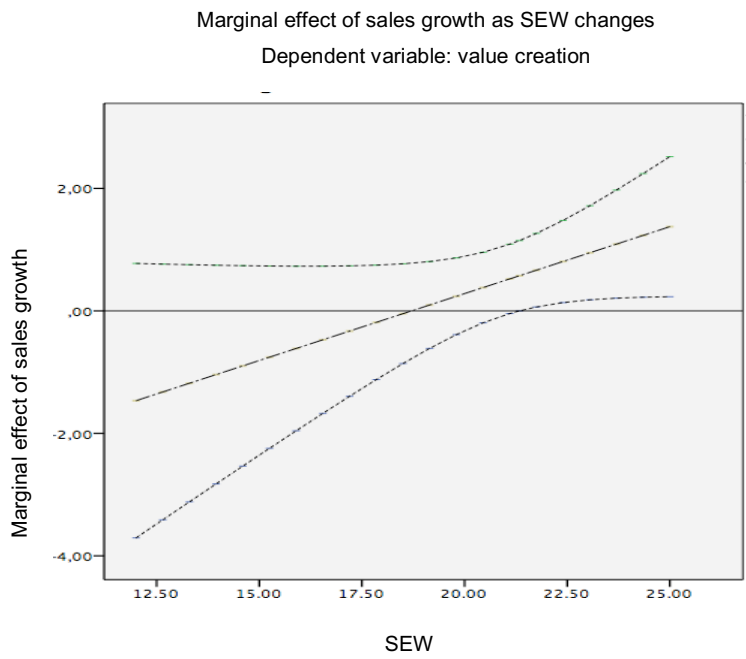
Dependent variable: value creation

Figure 3. Marginal effect of investment rate on value creation as socioemotional wealth changes

Marginal effect of investment rate as SEW changes

Dependent variable: value creation