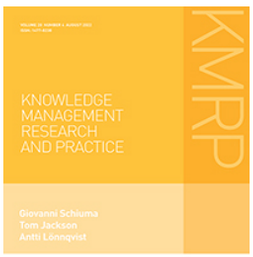

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ORIGINAL ARTICLE

Microfoundations of intellectual capital. Evidence from Italian small accounting firms

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ABSTRACT

The paper aims at understanding how small and medium accounting practices micromanage their Intellectual Capital (IC) for sustaining their performance in a constantly changing environment, starting from the CAOS framework. The paper employs a quantitative methodology based on a questionnaire developed with the Italian Chartered Accounting Association endorsement. 3,002 questionnaires obtained by solo owners of firms with less than 50 employees were analysed using a Structural Equation Model (SEM). The findings highlight that IC is a complex concept where entrepreneurial and organisational aspects interact together. A micro-level approach could be used to explain IC development. CEO's entrepreneurial orientation can support organisations in building knowledge management tools, as well as developing relational capital. CEOs who are more willing to take risks and innovate can better foster IC development, affecting firm's performance.

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Small and medium accounting practices; CAOS model; Microfoundations; Structural Equation Model (SEM); entrepreneurial orientation; intellectual capital

1. Introduction

Intellectual Capital (IC) has been defined as "the engine of knowledge creation" (M. Paoloni et al., 2020, p. 1798), and its impact on performance has been widely analysed both in manufacturing and service firms (Massaro et al., 2015). Interesting, while the relationship between IC and performance has been widely investigated under the umbrella of Resource-Based View theory (Andersén, 2011; Bellucci et al., 2020), findings depicted a multifaced picture with several differences. For example, Massaro et al. (2019) highlight how different types of organisations may require alternative integrative mechanisms, which can impact the relationship between IC and performance, calling for new research avenues. Similarly, analysing the bank sector, Curado et al. (2014) doubted the IC could have a positive influence on banking performance in all contexts. Again, public and no-profit organisations have been claimed to be peculiar contexts due to the different objectives (Guthrie et al., 2015; Kong, 2008). Finally, Nadeem et al. (2018) showed the need to adapt the relationship between IC and performance in emerging countries.

Interestingly, these studies have been accused of using "grand theories" that do not better understand the profound relationship between IC components and performance (Edvinsson et al., 2022). A definition of grand theories is given by Llewelyn (2003), who clarifies how such theories have a high degree of generality, and they are formulated by thinking through issues and relationships in a very abstract way than gathered through empirical or practical experiences.

More recently, a more in-depth understanding of the determinants of the relationship between IC and performance have been analysed. For example, Cegarra-Navarro and Martelo-Landroguez (2020) deepen the role of intellectual agility by defining it as the environments in which the staff are willing to modify structures and to think of innovative strategies to face their challenges to support firm growth. Similarly, Wu et al. (2020) investigate the role of imitation, defined as learning by watching the ability to support IC development. These studies allow shedding light on the micromanagement of IC (Rodgers et al., 2020), avoiding grand theories. Micromanagement refers to anchoring higher-level concepts like dynamic capabilities and human capital on lower levels by understanding their real dynamics in practice (Foss & Pedersen, 2016; Rodgers et al., 2020).

Microfoundational approaches allow not only to solely incorporate individuals or processes but also their interactions in the context of organisations (Barney & Felin, 2013; Szymanski et al., 2021). Among the microfoundational approaches, the CAOS model, developed by Paoloni (2011, 2021),

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allows deepening the view of the firm by mapping both the internal as well as external factors. The framework enables indeed to investigate the characteristics of the entrepreneur or entrepreneurial team (factor "C"), the business ambience in which the organisation operates (factor "A"), the organisational aspects in place (factor "O"), and finally, the sustainability features of the business venture, often referring to the situational moment (factor "S"). This paper aims to apply the CAOS model to the context of professional service firms, and more specifically to a peculiar type of professional consulting firms, namely small accounting practice, to understand better the interrelation that supports IC development and foster firms' performance.

Professional service firms represent an ideal context to study IC's micro-foundations since they are facing an increasing request to innovate their products and processes for sustaining their performance (Smets, 2016). On the one hand, customers' needs are rapidly changing due to the effect of globalisation and technologies (Guthrie & Parker, 2016). On the other hand, several professional service practices are changing due to the development of new technologies, such as Artificial Intelligence and the Blockchain (Bourke et al., 2020; Ferri et al., 2021; Massaro et al., 2022). Several conditions are, therefore, causing an identity crisis among accounting consultants and advisors, including regulatory requirements, public administration demands, and increasing power by technology providers (Caldarelli et al., 2019; Tomo & Spanò, 2020). The recent COVID-19 pandemic (WHO, 2020) is increasing the risk and volatility for all businesses, accelerating the need to improve firms' IC for sustaining business performance.

Additionally, professional service firms represent a unique research context due to the relative importance of human capital to sustain the service delivery and innovation (Smets, 2016) that accounts for more than 2 trillion dollars only in the US, with accounting firms that generate more than 180 billion (Massaro et al., 2020). Finally, when it comes to accounting firms, such practices are considered the most crucial business advisors for other SMEs (Massaro et al., 2015). Therefore, to us, understanding how accounting firms micromanage their IC for sustaining their performance in a constantly changing environment is a question worth addressing.

According to Foss and Pedersen (2016), the goal of the micro-foundations research agenda is to decompose macro-level constructs in terms of the actions and interactions of lower-level organisational members, to understand how firm-level performance emerges from the interactions of these members, and to understand how macro-level relationships are mediated by micro-actions and interactions. Starting with this premise, we want to address a research gap by focusing on micro-antecedents of IC (Edvinsson et al., 2022).

The paper is novel for several reasons. First, the CAOS model allows supporting the micromanagement of IC. Second, the model has been applied to an underinvestigated research context that, however, has an essential role in all organisations, especially SMEs. To develop the research, a structural equation model (SEM) was employed. SEM not only represents a widely used research method within the IC literature, it also allows to develop competing models to represent a more systematic and less overtly causal view of real-world processes describing social experiences and artefacts since it measures unobservable and abstract structures (Massaro et al., 2015). Statistical approaches like those based on SEM allow researchers to be more imaginative (Mouritsen, 2006). Moreover, SEM stands as a versatile approach that permits different testing paths in a non-predefined way (Ni & Sun, 2009). Several IC studies use SEM as a methodology, including Massaro et al. (2015), Mahmood and Mubarik (2020), Khan et al. (2019), Wang et al. (2014), and Kianto et al. (2017), just to mention a few. Therefore, we can claim how SEM can be considered as a widely accepted quantitative research method to analyse similar research contexts and topics.

The paper develops as follows. The next section is devoted to the literature review on IC, performance, micro-foundations, and the CAOS model, which supports the definition of our hypothesis. The methodology section deepens the research context, the survey development, and data collection and analysis. Findings are reported after, followed by the discussion chapter. A conclusion section ends the paper.

2. Literature review

2.1. IC, performance, and micro-foundations

The existing literature on intangibles highlights how IC can impact firms' success and competitive advantage (Bontis, 1998), demonstrating how higher intangibles investments lead to improved organisational performance (Edvinsson et al., 2022). IC is usually formed by three main pillars. Human capital is made up of an organisation's people's competencies, expertise, and skills (Ax & Marton, 2008). Relational capital is defined by an organisation's formal and informal relationships with external stakeholders (Dal Mas & Paoloni, 2019; Paoloni & Demartini, 2012). The structural capital of an organisation is defined by explicit information embedded within it (Massaro et al., 2018).

Interestingly, despite widespread acceptance of IC's concept and its link to success (Edvinsson et al., 2022), recent studies have begun to cast doubt on both (Dumay & Garanina, 2013). Townley et al. (2009) address the need to include cultural and social capital

in the definition of IC as essential domains for managing creative industries. Sánchez-Cañizares et al. (2007) suggest adding national and organisational culture as the core nucleus around which the remaining integrated capitals are configured. Bontis (2004), concentrating on the Arabic zone, examines a nation's IC in terms of human capital, process capital, business capital, and renewal capital. Pedro et al. (2018) underline the need to develop a clear description of IC's components and measures. As a result, we argue that different research contexts can necessitate different IC meanings and the need to go deeper in the investigation of its antecedents.

Furthermore, according to Jardon and Martos (2012), the relationship between IC and firm success is complex, as different contexts exhibit different characteristics. Analysing the banking sector, Curado et al. (2014) highlight that "clearly, there is no trust in the universality that IC has a positive impact on banking output in all contexts". Different organisations, such as colleges and educational institutions, have unique characteristics that must be addressed by using specific structures and methodologies (Paoloni et al., 2019; Secundo et al., 2018), and so are contexts like the one of healthcare (Au-Yong-Oliveira et al., 2021; Cavicchi, 2017; Cobianchi et al., 2020; Dal Mas et al., 2020) and cooperatives (Sánchez-Hernández & Castilla-Polo, 2021). According to Kong (2008), IC is a useful resource for non-profits looking to build specific models to achieve a long-term competitive advantage. Nadeem et al. (2018) explore how the relationship between IC and success in developing countries differs from that in developed nations. Massaro et al. (2019) extend the results of previous studies to the background of temporary teams in the sports context, indicating that IC contributes to success. Their findings demonstrate how specific integrative processes, such as assembly decisions and team leader experience, affect the performance by interacting with current IC. All in all, the literature highlights how, as a result, the relationship between IC and performance is complex, requiring additional study in a variety of settings (Edvinsson et al., 2022; Massaro et al., 2015) to better increase its understanding in a real-world scenario that may benefit from such results.

Several studies deepen the elements related to IC that proved to boost the firm's performance. Andreeva and Garanina (2016), investigating the Russian manufacturing context, highlight that structural and human capitals positively influence organisational performance, explaining a quarter of its variation, while relational capital does not. Abd-Elrahman et al. (2020) analysed the telecommunication sector in Egypt, reporting how structural capital and relational capital seem to make a more significant impact on performance than human capital. All these studies underline inconsistencies, and again, the need to focus on specific contexts and experiences (Andreeva & Garanina, 2016).

To better understand the evolutionary process of the firm's capabilities, many studies analyse micro-foundations of IC (Bendig et al., 2017). According to Foss and Pedersen (2016), micro-foundations on strategy represent a broad set of research heuristics that call attention to interlevel mechanisms and underline the explanatory importance of the micro-level. Several studies investigate how micro-level antecedents influence firm's dynamic capabilities (Abell et al., 2008), distinguishing between the organisational and personal level of analysis (Foss & Pedersen, 2016).

On the organisational level, the accumulation of knowledge resources (e.g., human, relational, and organisational capital) is a central driver of IC development (Bendig et al., 2017). Interestingly, knowledge resources are influenced by several personal characteristics, such as the cognitive skills of managers (Vogel & Güttel, 2013). IC must be built by managers that have the aim of shaping organisational outcomes (Cobianchi et al., 2021; Driesch et al., 2015). Manager age, experience, personality, and turnaround are variables studied as micro-foundations of firms' dynamic capabilities. Similarly, other studies focus on the role of team member transactive memory, such as the knowledge of who knows what (Argote & Ren, 2012). More recently, some studies focus on the role of personal relational capital as effortful social accomplishment emerging from individual employees' capacity to leverage interpersonal relationships (Salvato & Vassolo, 2018).

Deepening the internal relationship among IC components, recent studies have proved, for example, how structural capital in the term of technological acceptance and adoption might be influenced by several factors of human capital, such as the share of foreign employees (Demirbag et al., 2021) or some team dynamics, including diversity (Cobianchi et al., 2022). Similarly, Emre Yildiz et al. (2021, p. 1) state that "goal orientations of employees affect their individual-level absorptive capacity". Interestingly, despite being dated to the mid of the last century, micro-foundations studies have started gaining momentum only recently (Foss & Pedersen, 2016). Interestingly, when applied to IC, the micro-level of analysis enables the identification of a phenomenon's proximate causes at stages of study lower than the phenomenon itself, allowing, therefore, to avoid the risk of applying grand theories (Dumay, 2012) and to investigate the antecedent of IC, with managerial practice implications worth addressing (Dumay & Garanina, 2013), contributing, at the same time, to bridging the gap between academic studies and practitioners views (Massaro et al., 2018).

2.2. The CAOS model, accounting firms, and hypothesis development

Moving from this premise, this study aims at investigating how IC components interact to support performance, using a micro-foundation approach. The CAOS model (Paoloni, 2011, 2021) is applied as a framework to investigate how personal and organisational variables interact to support firm performance. Focusing on the personal individual characteristics of the entrepreneur and the organisational and environmental variables, the CAOS model was previously applied in similar studies (Cosentino et al., 2020; Dal Mas & Paoloni, 2019; Dal Mas et al., 2019; Mercuri et al., 2021; Paoloni & Dumay, 2015; Paoloni et al., 2020). The model employs four dimensions and defines some possible relations among them (Paoloni, 2021):

- C – Characteristics of the entrepreneur
- A – Relationship with the external ambience or environment in which the organisation operates
- O – Organizational structure for managing knowledge
- S – Financial sustainability of the situational moment.

The first dimension analysed in the model reflects entrepreneurial characteristics, which can be read according to different lenses. The role of entrepreneurial features and their relationship with the environmental and organisational factors have been widely investigated through the lens of "Entrepreneurial orientation" (EO). For example, Alvino et al. (2020) underline how organisations that employ high-technology tools to make the most of their IC can stimulate EO, with a significant effect on business models, through the involvement of sustainability values in the development of economic, environmental, and social dimensions. The topic of EO within accounting firms has been discussed in the Australian context by Sok et al. (2017), who started with the idea that the EO-performance relationship is more complex than a simple main-effects-only relationship. Their results underline the mediating role of marketing capabilities and resources. Interestingly, while most of the literature defines EO as an organisational factor, more recently, Ahn et al. (2017) focus at the individual level discussing Chief Executive Officer (CEO)'s EO and its impacts on innovation. In order to evaluate the "C" factor, we focus on CEO's EO, initially relying on the questions proposed by Lumpkin and Dess (1996).

According to Paoloni (2021), following the analysis of the entrepreneur's characteristics, it is crucial to analyse the business's operating ambience, which affects the way the venture is conducted. The second dimension of the CAOS model refers to the relationships that the company has with the external environment. As the sum of existing relationships, relational capital allows firms to leverage on external resources (Sharabati et al., 2010), and this looks particularly true when it comes to professional service firms (Hitt et al., 2006; Jones & Taylor, 2012). However, firms are driven by strategic decision-makers who are equipped with entrepreneurial skills such as proactiveness, innovation, and risk-taking in order to effectively exploit and optimise these resources (Roxas, 2021). Therefore, we derive our first hypothesis as follows:

HP 1 *– C (measured as CEO's EO) positively affects A (measured as the Relational Capital of the firm)*

In small firms, organisational characteristics are mainly affected by the primary entrepreneur's behaviour. As suggested by Khedhaouria et al. (2015) CEOs are in charge of helping to set and direct the organisation's strategic orientation, while business owners have a major role in influencing the manifestation of EO through risk-taking, innovativeness, and a proactive orientation towards competition. Entrepreneurs that want to support innovativeness and risk-taking must develop an organisation more oriented to acquire and exploit knowledge (Latif et al., 2020). Therefore, entrepreneurs that are focused on taking risks and stimulating innovation can nurture their knowledge management processes. In accounting firms, knowledge sharing can support leveraging the skills, knowledge, and best practices of the professional staff. Moreover, accounting firms' ability to effectively deploy knowledge-sharing activities appears increasingly vital to nurture their competitive advantage, including gaining tangible benefits like time and cost reductions (Fu et al., 2017; Vera-Mun˜oz et al., 2006). Such identity reconstruction is highly recommended following the challenges posed by the current scenario (Tomo & Spanò, 2020). From this premise, we postulate our second hypothesis as follows:

HP 2 *– C (measured as CEO's EO) positively affects O (measured as Knowledge Management Practice developed)*

Additionally, if the information embedded with networks of interrelationships and their interactions among individuals could be defined as relational capital (Mahmood & Mubarik, 2020), we could easily postulate that companies that have greater access to that knowledge will need better knowledge management tools to deal with it, and, therefore, to transfer knowledge in an effective way (Dal Mas et al., 2021; Seleim & Khalil, 2011). Knowledge management appears fundamental in accumulating IC (Shih et al., 2010). When it comes to relations, interactions require establishing social networks and involve the sharing of diverse knowledge, which, in turn, facilitates the accumulation of relational capital (Seleim

& Khalil, 2011), with a positive effect on knowledge transfer performance (Chen et al., 2009). Thus, we derive our third hypothesis as follows:

HP 3 – *A (measured as Relational Capital of the firm) positively affects O (measured as companies Knowledge Management practice)*

Previous studies have highly investigated how different components of IC and knowledge management practices positively impact firms' financial sustainability. According to Jordão and de Almeida (2017), IC influences organisations' profitability and corporate return positively. In the Brazilian experience, the more intangible-intensive listed public companies feature higher financial sustainability than others. The positive influence works both in terms of profitability and corporate return, either individually, globally or by industry. According to their results, IC fosters financial performance systematically and over time. Following the same line, Gross-Gołacka et al. (2020) state as IC is one of the best resources to create market value and reinforce sustainable competitive advantages. The recent literature underlined the role of IC as a mediator in the corporate social responsibility and financial performance relationship (Nirino et al., 2020). The connection between IC and knowledge management practices has an impact on financial sustainability. In a recent study, Kavalić et al. (2021) demonstrated the relevant role of knowledge management dimensions in ensuring the competitive sustainability of organisations. Concerning accounting firms, the adoption of new technological practices affecting the accounting process like Artificial Intelligence and Blockchain can have an impact on costs, increasing financial sustainability (Ferri et al., 2021; Massaro et al., 2022).

Building on those studies, we formulate our fourth hypothesis as follows:

HP 4a – C (measured as CEO's EO) positively affects S (measured as financial sustainability)

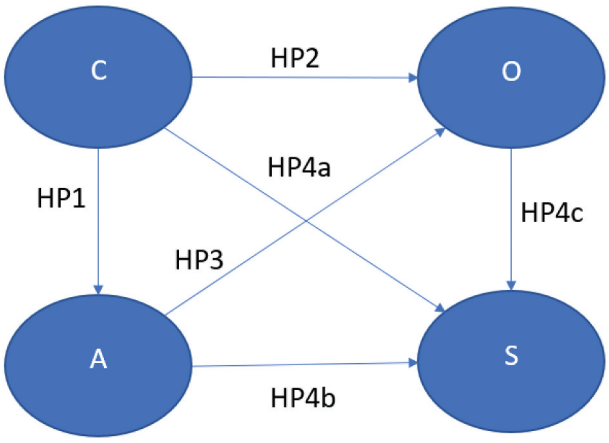

Figure 1. The CAOS model and the hypotheses developed.

HP 4b – *A (measured as Relational Capital of the firm positively affects S (measured as financial sustainability)*

HP 4c – *O (measured as companies Knowledge Management practice) positively affects S (measured as financial sustainability)*

Figure 1 depicts the overall research model.

3. Methodology

3.1. Research context

This study aims to provide a clear "ground for understanding the levers behind IC drivers" in the context of small to small and medium accounting practices (Andreou & Bontis, 2007). Small and medium accounting firms are among the most valuable business advice sources for entrepreneurs (Gooderham et al., 2004). Additionally, accounting companies are personnel-intensive organisations that are challenged with the task of constant innovation in order to increase the quality of services offered to their clients, who are typically small and medium-sized businesses (CPA Australia, 2019). Italy stands out as a country worth investigating in this context. First, it includes 118,639 chartered accountants, who collectively contribute a significant portion of the national GDP (Massaro et al., 2015). Furthermore, Italy has a large concentration of small and medium businesses (European Commission, 2019). Three of the authors are based in Italy, allowing them to be close to and recognise the country's specific situation. Finally, Italy provides a particular background for this study since small and medium accounting firms have been threatened by increasing uncertainty due to the manufacturing sector's decline and a shift in requested services from established manufacturing clients driven by the demand for management consulting.

3.2. Questionnaire development

To develop our questionnaire first, we relied on previous studies. The original questions found in previous studies were discussed with the national board of Chartered Accountants to be adapted to the specific context under investigation. More precisely, to evaluate the "C" factor, we started with the seminal paper of Lumpkin and Dess (1996). Adaptation to the original model was then discussed with the Italian national board of Chartered Accountants. To evaluate "A" factor, namely the ambience or relationships with the environment in which the firm operates, we employed the questions previously used by Massaro et al. (2015) on relational capital. In this case, we provided few changes due to the fact that the study was originally focused on accounting firms. To evaluate the "O" factor,

namely the organisational aspects, we focused on the questions proposed by Cantú et al. (2009). Also in this case, the original set of questions was discussed with the national board and adapted to the specific research context. Finally, to measure financial sustainability, "S", we relied on the questions proposed by Lumpkin and Dess (1996) after careful revision developed together with the board of the National Chartered Accountant Association.

To test the validity of the survey, we submitted the questionnaire to a pilot group of 30 small accounting firms spread on a national base. The detailed questions used in the survey are reported along with the main results in Table 1.

3.3. Data collection

In order to test the study hypothesis, we collected data from a questionnaire involving all chartered accountants registered in Italy under the Italian Chartered Accounting Association. First, we developed a pilot case and sent it to the National Board of the Italian Chartered Accounting Association for review, thus obtaining an expert opinion. Cronbach's Alpha and Factor Analysis were used to evaluate the reliability of the questionnaire after we got the responses from the pilot group (Tourangeau et al., 2020).

An email was sent to all the members of the national association of Chartered Accountants collecting 7,568 surveys. We decided to focus on the responses given by solo owners of firms with less than 50 employees as it has been highlighted that owners influence tend to be reduced when firms grow (Manzano-García & Ayala-Calvo, 2020), collecting, therefore, 3,002 questionnaires.

3.4. Data analysis

A Structural Equation Model (SEM) was used to evaluate the hypotheses. SEM analysis supports real-world research because it is able to quantify and describe abstract notions as well as causal relationships with social and artifactual concepts(Massaro et al., 2015). The measuring method used consists of three stages. Our model was first created and translated into a computer program using R software and the Lavaan library based on the theoretical hypothesis (Rosseel, 2012). The latent variables formed were assessed using preliminary steps such as confirmatory factor analysis and Cronbach's alpha to verify the consistency of the latent variables (Diamantopoulos & Singuaw, 2000). Once we had discovered our model's parameters, we tested the hypotheses (Ramlall, 2017). Validation tests are established in a third stage by going through several approaches. More specifically, we concentrate on the fitness index (GFI), the modified fitness index (AGFI) and the comparative fit index (CFI) for which values of 90 are considered suitable (Medsker et al., 1994) and the non-standard fit index (NNFI) for which values should be similar to one for a good fitness model (Diamantopoulos & Singuaw, 2000). We also established a root mean error approximation (RMSA) square, which should be less than 0,08 for acceptable fit and less than 0,05 for good fit (Diamantopoulos & Singuaw, 2000). We based on these measures as they have been commonly used in similar studies (Daddi et al., 2019; Liao, 2018). Finally, we cross-validated our model by dividing the sample by firm diversification, calculated in terms of the total number of services provided by the firm and used the steps previously discussed to cross-validate our model (Diamantopoulos & Singuaw, 2000). More focalised companies are assumed to lean less on Knowledge Management tools. At the same time, more focalised companies have fewer opportunities to create new customised services. As a result, firm diversification was used as a control variable in our model.

4. Findings

This section details the study findings. The first subparagraph presents the conclusions of the preliminary measures which therefore describe the validity of the general model. Results of parameter estimation and validation for the four proposed hypotheses are presented in the next subsection. The third subsection discusses the cross-validation findings and the model fit indexes.

4.1. Model specification and preliminary measures

The creation of the models was the first step in the measuring process. Skewness and kurtosis analysis were carried out to determine the estimation process (Diamantopoulos & Singuaw, 2000). Among the various estimation techniques, maximum probability should be applied when there are 5 or more groups and the threshold is estimated symmetrical. The coefficients of skewness for the variables observed vary from −1.3 to 0.35 and the coefficients of kurtosis range from −0.8 to 1.8 with a minor non-normality. According to Vieira (2011) the sample size decreases the abuse of the normality assumption and if the distribution is not widely non-normal, the maximum likelihood is accurate in most cases. Results show variables that are less than three and less than eight, confirming the applicability of the SEM model (Kline, 2015).

Table 1. Main results of the preliminary measures.

Variables	Estimate	se	Z-Value	P-value	Chronbach's Alpha
C					**0.869**
My firm listens to the clients' needs vs focusing on existing services	0.184	0.014	13.27	>0.001	
My firm is ready to take advantage of the new opportunities coming from technology vs focusing on existing services	0.563	0.015	36.759	>0.001	
My firm has a strong propensity for activities that involve greater responsibilities and higher profitability rather than activities with less responsibility and lower profitability.	0.604	0.017	35.354	>0.001	
My firm has a strong propensity to catch the opportunities rather than exploring gradually and with caution.	0.65	0.016	40.271	>0.001	
My firm adopts courageous actions to seize opportunities even if risky rather than using a wait-and-see approach.	0.716	0.018	40.163	>0.001	
My firm has a strong propensity to introduce new activities and working methods rather than exploit existing ones.	0.715	0.015	46.237	>0.001	
My firm tends to respond promptly to the competitive context that surrounds it.	0.59	0.014	41.549	>0.001	
My firm is eager to introduce new services based on their own knowledge rather than following trends.	0.565	0.015	38.669	>0.001	
My firm uses a very aggressive approach to the competitive environment.	0.563	0.017	33.678	>0.001	
A					**0.779**
Importance of relationships: Professional reputation	0.446	0.012	38.704	>0.001	
Importance of relationships: Relationships with clients, banks, suppliers, and other stakeholders who are meaningful for the clients	0.611	0.014	42.197	>0.001	
Importance of relationships: Quick communication with the clients	0.488	0.012	41.301	>0.001	
Importance of relationships: Relationships with other professionals from other firms	0.567	0.017	33.868	>0.001	
O					**0.938**
The working environment enhances knowledge sharing among all members	0.463	0.011	41.289	>0.001	
The working environment enhances trust	0.496	0.011	46.718	>0.001	
Team discussion is ofter used to solve issues	0.575	0.012	47.58	>0.001	
Within the firm, everyone is creating and sharing knowledge	0.601	0.012	50.119	>0.001	
The working envinromen encourages the development and personal iniatitive	0.548	0.012	47.166	>0.001	
The firm takes everyone's suggestions and ideas into high consideration	0.581	0.011	54.587	>0.001	
All activities are considered as important opportunities to enhance knowledge sharing	0.546	0.01	53.338	>0.001	
All activities are considered as important opportunities to generate new ways of doing things	0.53	0.011	48.965	>0.001	
Time schedule allows to acquire and share new knowledge within the team	0.521	0.013	41.456	>0.001	
Time schedule allows to think about the successes and failures	0.494	0.013	36.574	>0.001	
S					**0.794**
Level of sales	0.351	0.016	21.945	>0.001	
Client portfolio	0.298	0.016	18.376	>0.001	
Level of income	0.353	0.017	20.6	>0.001	
Respect of time in delievering services	0.52	0.017	30.656	>0.001	
Level of stress on work loads	0.596	0.02	30.139	>0.001	
Quality of services delievered vs quality goals	0.482	0.015	32.381	>0.001	
Client satisfaction	0.288	0.012	23.562	>0.001	
Actual use of resources (human and material) vs plan	0.536	0.015	35.588	>0.001	

Subsequently, we established a test of reliability and validity for each latent variable used in the model. Cronbach's Alpha shows that all latent variables used values above the traditional value of 0.70, with a minimum of 0.727 for structural resources and a maximum of 0.937 for information management, implying that the calculated items are internally consistent. Factor loadings are all meaningful at the level of 0.001, and have a minimum Z-value of 13.27 and a maximum of 54.58. Table 1 depicts the main results of the preliminary measures.

4.2. Parameter estimation

Findings show how "C" affects both "A" with a coefficient of 0.290 with a z-value of 12.679 and p-value less than 0.001 and "O" with a coefficient of 0.218 a z-value of 9.770 and a p-value of less than 0.001. These results confirm the importance of individual characteristics in affecting the firm's overall organisation, and the ability to create fruitful relationships with the external environment are strongly influenced by entrepreneur's EO. Therefore, there results confirm HP 1 and 2. Additionally, findings show how external relationships with the environment affect the internal organisation of the firm with a coefficient of 0.470, a z-value of 19.102 and a p-value of less than 0.001, thus confirming HP 3.

Interestingly, findings show how firm financial sustainability is affected by all the variables confirming HP 4a, 4b and 4 c. However, "C" shows the highest importance with an estimated parameter of 0.309, z-score of 12.074 and p-value of less than 0.001. The variable "0" shows an estimated parameter of 0.121 with a z-value of 5.223 and p-value of less than 0.001. Interesting, variable" A," shows an estimated parameter of 0.088 with a z-value of 3.179 and a p-value of 0.001. Figure 2 depicts the results of the analysis.

4.3. Model validation

To assess the model validity, we calculated a number of fitness tests, assuming that the higher the model fit, the greater the usability of the model is. Among the different fit measurements, the model's fitness index

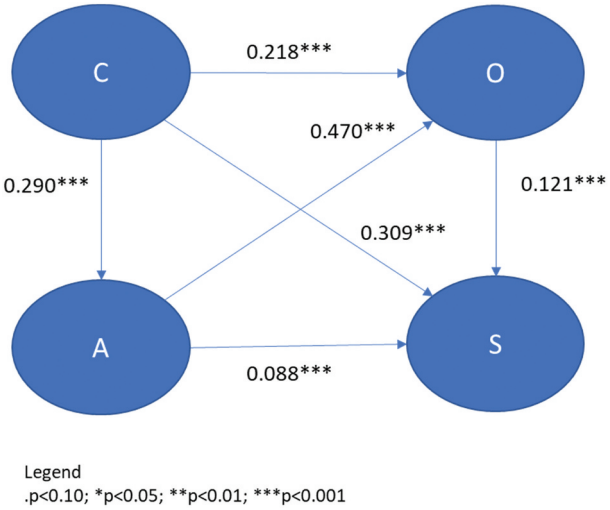

Figure 2. Findings of the analysis.

(GFI) value is 0.969 and the AGFI value is 0.945. In addition, the RMSEA is 0.036 and the NNFI is 0.963. All incremental measurements of fit are consistent with the criteria suggested in the literature and mentioned above.

Finally, to cross-validate our model, the sample is divided into two groups according to the firm dimension. More specifically, we calculated the total number of services offered by each company and divided the sample into two categories to identify more focused and more diversified firms. The outcome was two sets of 1,468 and 1,534 interviews. The findings support the key results and are identical in both classes, as reported in the following Table 2.

5. Discussion

Findings contribute to the existing IC theory in several ways. First, they allow shedding new light on the definition of IC. Traditional approaches on IC see it at an organisational level (M. Paoloni et al., 2020, p. 1798). More recently, a micro-level approach has emerged, focusing on micro-foundations of IC. Following this research line, we argue that IC is a complex concept where entrepreneurial and organisational aspects interact together.

While grand theories (Dumay, 2012; Edvinsson et al., 2022) can harm IC development using a helicopter view, our results show how a micro-level approach could be used to explain IC development, gathering practice implications according to the specific context. Previous studies showed how manager characteristics such as managers' multilingual communication abilities and multicultural background could support organisational performance (Szymanski et al., 2021). Our findings contribute to this research line, suggesting how CEO's EO supports organisations in building knowledge management tools measured in the variable "O" as well as to develop relational capital measured in the variable "A". According to Massaro et al. SMEs are, at times, satisfied with their existing business; for this reason, they are not motivated to expand beyond their comfort zones (Massaro et al., 2015). Our findings suggest that CEOs more willing to take risks and innovate support IC development (namely "A" and "O") and foster, therefore, IC development.

Additionally, our findings contribute to explaining the relationship between IC and performance. Previous studies focused on the need to consider the specific business analysed (Edvinsson et al., 2022; Massaro et al., 2015). Our findings show that in small accounting firms, the CEO's EO is the most important variable able to affect firm performance. Small firms, in general, are strongly shaped by entrepreneurs' motivation and believes (Manzano-García & Ayala-Calvo, 2020). Firms more willing to take risks, support innovation and exploit new opportunities tend to outperform competitors. Interestingly, these results provide a different picture from the one provided by Massaro et al. (2015) that found a very small influence of firm ambition and willingness to take risks and innovate on firms' performance. Several motivations could explain the different results. First, the economic context has widely changed for most developed countries in the last few years (Guthrie & Parker, 2016). Second, chartered accountants and accounting firms in Italy are both struggling with the change of the economy as well as with the competition imposed by the technological developments and the new rules in accounting practices, for example, mandatory electronic invoicing (Massaro et al., 2022; Smets, 2016). In all, the growing competition

Table 2. Model validation.

	Overall model			Limited diversification of services			High diversification of services		
Relationship	Coefficient	Z-value	p-value	Coefficient	Z-value	p-value	Coefficient	Z-value	p-value
C – > A	0.290	12.679	***	0.264	8.064	***	0.288	9.059	***
C – > O	0.218	9.770	***	0.187	5.973	***	0.248	7.803	***
C – > S	0.309	12.074	***	0.301	8.269	***	0.296	8.277	***
A – > O	0.470	19.102	***	0.422	12.231	***	0.518	14.757	***
A – > S	0.088	3.179	**	0.076	1.938	*	0.097	2.494	**
O – > S	0.121	5.223	***	0.084	2.547	**	0.154	4.709	***
Goodness of fit indexes	GFI = 0.957; AGFI: 0.945; RMSEA = 0.036; CFI = 0.969			GFI = 0.946; AGFI: 0.931; RMSEA = 0.038; CFI = 0.965			GFI = 0.946; AGFI: 0.931; RMSEA = 0.038; CFI = 0.965		

and margin reduction produced by increased competition is fostering new business approaches in small accounting firms (Bills et al., 2021).

Finally, if CEO's EO becomes an essential part of firm IC, new approaches to measure and evaluate it are required. IC measure and disclose represent widely investigated topics. However, the development of a micro-level perspective could lead to the need of adapting existing approaches. Focusing on the German experience of IC statement (ICS) Bornemann et al. (2021) highlight how ICS is not an insulated method but delivers the maximum benefit when integrated with strategy development, strategy implementation, business process optimisation, along change management routines. The development of a micro-level could contribute to showing the exploitation of a new dimension that should be taken into consideration.

6. Conclusions

Our study contributes to IC theory in terms of micro-foundations and IC and the relationship between IC development and performance by analysing the case of small accounting firms. Practical and research implications can be gathered from our findings.

6.1. Practical implications

Our results may be helpful to managers of small accounting firms, providing evidence that improving IC can increase firm performance and suggesting that CEO's EO has a significant impact on the IC development and firm performance. Therefore, accounting firms more willing to gain competitive advantage should invest in IC and knowledge practices. Since accounting professionals undergo pre-defined training defined by policy, our results may be valuable for Business Schools and professional education bodies in general aimed at training future Chartered Accountants. Indeed, EO is based on ambition, self-confidence and stresses management attitude. Professional firms are changing, and so is the needed skill set, which is turning to more non-technical or soft competencies. Educational curricula should be assessed, to see if they can grant a strong approach to entrepreneurship, which could help the overall sector development along with dedicated mandatory training policies, more aligned with today's needs and competitive environment.

6.2. Limitations and future research avenues

As any study, our research has some limits. First, it focuses only on one country. Cultural elements such as some contextual variables might affect our results. Second, it focuses only on small accounting firms. Results might not be applicable for medium or large firms. All these limitations could be used as new research paths to repeat the study in a different context or with larger firms, better investigating the relationships among the elements such as EO, relational capital, knowledge management practices, and financial sustainability. Extending the field of study to other types of firms, both service firms in broader terms or companies active in other industries, may also be beneficial to expand the results, leading to tailored managerial and policy implications.

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