Capturing Entrepreneurial Opportunities in the Romanian Equine Sector: an Fs-Qca Approach

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Abstract

The paper proposes an analysis of entrepreneurial intentions in the equine sector in Romania and the identification of the variables influencing economic growth in this field. The equine sector plays a strategic role in the development of durable, sustainable and social entrepreneurship. The combination of equine services can ensure a business's survival during a crisis, and businesses involving horses can be considered complex. The equine sector is constantly changing: it is affected by politics, the social environment and new competitors. Changing customer requirements make it a difficult area in which to develop a sustainable start-up ecosystem. The present study is important in drawing attention to the main impediments faced by Romanian entrepreneurs in the development of the equine sector, a sector which—because of the emotional and physical benefits that horses offer—has great potential. The horse industry needs true "enthusiastic entrepreneurs" who have the management knowledge and skills to make their business more professional and profitable. It was found that the firm's organisation method is an important factor in predicting business continuity, in achieving medium- and long-term objectives, and in ensuring business success.

Keywords Equine sector · Entrepreneurship · Horse enthusiasts · Economic welfare · Social entrepreneurship

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Introduction

The equine sector is a competitive one, and offers a range of benefits and services: cultural, social, touristic and sports. It needs to observe the integrity of the natural environment, and this is indeed an essential principle for ensuring future entrepreneurial success. Romania needs entrepreneurs in this field, and to achieve this will take the involvement of government, horse enthusiasts, and a range of other stakeholders.

The equine sector has in recent decades been in transition from the traditional use of horses in agriculture to breeding and sports, which has brought new business ideas. Due to the variety of disciplines and services in this sector, it can offer a wide range of jobs to people who wish to work with horses. As far as we know, there has been no empirical research in Romania on entrepreneurial intentions in the equine sector. New research could benefit from the experience of equine entrepreneurial projects conducted in other countries (Elgåker, 2012), such as the UK, where entrepreneurial activity focuses mainly on competition and sport, racing, recreation and pleasure (Eastwood et al., 2008). In Latvia, policymakers have acknowledged the contributions that the equine sector brings to local economies, the contributions of cooperating stakeholders in developing new entrepreneurial ventures, and the supportive strategies that should be developed (Zeverte-Rivza & Paula, 2014). In France, most equestrian entrepreneurs start out as experienced riders, and there seems to be a balance between economic and entrepreneurial rationality on the one hand and a passion for riding on the other (Grefe & Pickel-Chevalier, 2015). In Finland, the equine industry brings market-driven opportunities to rural areas and farms, leading to the transformation of entrepreneurial intentions into actions (Rantamäki-Lahtinen et al., 2018). An Australian study looking at the cost, effectiveness and acceptability of initiatives in the equine sector took account of the spatial spread of horses and their potential impacts on management strategy (Beeton & Johnson, 2019).

Today's customers demand "social welfare", i.e., a healthy lifestyle that increasingly encourages a combination of physical exercise, relaxation, and socialising beyond urban barriers. These needs are increasingly met in rural areas, which are full of recreational activities. This new trend is a great asset for the equine industry. Horse riding offers not only physical rewards but also mental relaxation, because of the benefits of being close to horses in nature.

Romania had an urban population of 54.6% (woldometers.info) in 2020, and the desire of people in urban areas to connect more and more with rural areas is growing. According to the estimates published by the Food and Agriculture Organization of the United Nations (FAOSTAT), Romania is among the countries with the largest number of horses in the European Union: in 2019 it was 447,791 heads for a population of 19,364,557 inhabitants, i.e., about one horse for 43 people.

The business environment in Romania is full of challenges, and many entrepreneurs tend to focus on the social-ethical or sustainable sphere. Entrepreneurship is one of the most significant forces behind innovation, skills and growth. The

most important qualities of entrepreneurs are motivation, passion and innovative spirit. An entrepreneur in the equine industry can be called an "enthusiastic entrepreneur" because it can turn their enthusiasm into profit (Pussinen & Thuneberg, 2015). The potential entrepreneurs who are enthusiastic about this field must find the right combination of passion and business sense if they are to create a profitable and successful business.

The enthusiastic entrepreneurs must have management skills and be able to create and maintain a profitable company. Based on Ajzen's (1991) theory of planned behaviour, a study conducted by Angriawan et al. (2012) had two main findings: that subjective norms and perceived behavioural control are positive and significant predictors of equine entrepreneurial intention, and that the study of entrepreneurial intent in this sector is important because it generates wealth, jobs and tax revenue. Another research seeks to explore the attitudes of horse enthusiasts toward business ventures, looking at how they search and find out information, their emotional involvement with horses, their knowledge, and the best practices related to equine welfare (Visser & Van Wijk-Jansen, 2012). The horse industry is not significantly different from that of other agriculture-related industries, in that sustainable entrepreneurship practices are highly valuable (Rantala et al., 2019).

The equine sector is influenced by developments both inside and outside the industry. Politics, the social environment, new competitors and customer's requirements make the horse industry an ever-changing one, where businesses should adapt as quickly as possible if they are to succeed.

To survive in competitive conditions, some entrepreneurs are looking for ways of offering various combinations of services. The main activities are horseback riding, equine sports (training, organisation of competitions), therapeutic riding, tourism and recreation.

The reference factor chosen for this study is entrepreneurial intention. On this topic, research and models analysing equine entrepreneurship from a social, behavioural and educational point of view are not sufficient. Therefore, we set out to find answers to the following research question: What is the interest shown by horse enthusiasts for the development of a business in the equine field?

This study seeks to provide an overview regarding the strategic entrepreneurial intentions of horse enthusiasts in Romania, considering the need to establish causal relationships between agritourism, sports and therapeutic activities on the one hand, and entrepreneurial intentions in the equine sector on the other.

The paper is structured as follows: we identify and analyse the peculiarities of equine entrepreneurship from a theoretical perspective and its main components: agritourism, sports and therapeutic activities. Then we highlight the conceptual model, the method employed to answer the research question. Then we explain our findings and outline the conclusions, managerial implications, limitations and further research.

Literature review and conceptual framework development

Enthusiastic entrepreneurs in the equine sector are passionate about all activities related to the involvement of horses. Passion is considered both antecedent to and consequent to entrepreneurial intentions. (Gielnik et al., 2015; Ranfagni & Runfola, 2018). The passion of horse owners makes the gap between where they currently are and where their entrepreneurial intentions might take them easier to bear.

The roles of the farmers and horse owners are also constantly changing. They are becoming more entrepreneurial and acquiring business skills in order to be competitive (McElwee, 2006). Horse owners wishing to become equine entrepreneurs need to reflect on their responses to the institutional changes and the economic and technological disruptions currently faced by the sector (Cheriet et al., 2020).

Only a few studies have explored the configurations of motivational antecedents of entrepreneurial intentions in the equine industry, allowing us to understand better both the cognitive and the affective processes leading to the start-up decision in this sector (Liñán & Fayolle, 2015). We consider that affective processes are more relevant than cognitive ones, considering the passion felt by horse owners.

Sustainable entrepreneurship in the equine sector

The term entrepreneurship can be defined in various ways (Malecki, 1993). There are two types of reaction available to an individual firm or an entire industry in the face of changing conditions: (1) they can adapt using existing traditional tools, or (2) they can do something completely new or do things in a new way; this is called a "creative response". Entrepreneurship can be defined as a creative response. Accordingly, entrepreneurs are people who see the new possibility and are able to cope with resistance and challenges (Schumpeter, 2013).

Entrepreneurship could also be classified as opportunity entrepreneurship or necessity entrepreneurship. The former term refers to the situation in which a new company is started because the entrepreneur saw a business opportunity and wanted to implement a good business idea. The latter term refers to the situation where the entrepreneur had to start a business in order to be self-employed. Creativity, passion for horses and hard work are the key points of innovative future of the equine sector (Korpa et al., 2013). Theodore Roosevelt (1920) emphasised that the essential things in entrepreneurship are to do what you can, with what you have, wherever you are.

An entrepreneur in the equine industry can be called an "enthusiastic entrepreneur". These horse owners, who want to turn their passion into profit, are also called "soul-based business owners" or "heart-based, conscious business owners" (Roggen, 2010).

Equine entrepreneurship can focus on three dimensions: (1) social, because it is human-centred in its sports and therapeutic activities, including its impact on people with disabilities, (2) the contribution to sustainable development in the bioenergy produced from horse manure, and (3) economic, through rural development.

Previous research emphasises that professional entrepreneurial profiles are typically few in the equine industry because they hesitate to cooperate, they are not sufficiently market-oriented, and they may lack the necessary knowledge. Nascent entrepreneurs in the equine sector were previously involved in breeding, training or recreational horsemanship before starting a business. They took a business opportunity connected with a personal interest: a hobby, a passion or an extension of their farming activities (Helgadóttir & Sigurðardóttir, 2008). Furthermore, the obstacles perceived by equine entrepreneurs typically caused fear of failure, affecting how well they evaluated and exploited opportunities (Kollmann et al., 2017). A future trend for income generation is the combination of services provided by the equine sector in the areas of welfare and social relaxation (Sommerville et al., 2018).

The ability to offer a variety of services or activities can also be achieved by forming groups or clusters of entrepreneurs. Ketels (2003, p. 10) summarises the advantages of grouping as "several types of location-specific positive externalities". This competitive and cooperative environment allows members of clusters to feed each other, to develop close relationships, to make better use of their expertise and continually to improve the equine sector's image, both as a business proposal and for potential customers.

Moreover, a network effect can be created, attracting even more businesses to the area. By developing relationships and knowledge with other horse enthusiasts from different fields of work, their services can be coordinated more effectively. Schmitz and Nadvi (1999) suggest that clustering agreements are a growing phenomenon, one by which small businesses often (though not always) manage to overcome growth constraints and compete in remote markets.

Sustainable entrepreneurship is a nascent stream of research connecting the concepts of sustainable management and entrepreneurship. New sustainable start-ups usually enter sustainable niches such as the equine industry, characterised by high environmental and social standards (Belz et al., 2017). Sustainable entrepreneurship in the equine sector is typically focused on preserving nature, horses' welfare and agritourism. When people are attempting a start-up in the horse business, the gains anticipated are both economic and environmental (Shepherd & Patzelt, 2011). Equine entrepreneurs have long struggled with profitability due to the challenges presented by increasing costs and environmental regulations. New sustainable strategies are therefore needed if they are to increase the profitability of their business (Rantala et al., 2019). A multi-sided online platform connecting horse owners and potential investors has been suggested as a sustainable solution for funding the entrepreneurial initiatives of enthusiastic entrepreneurs in this field (Drăgan et al., 2021).

Equine agritourism

No tradition exists in some parts of Romania of sport as an aspect of equine tourism, despite the horse being present in the lives of villagers. In mountainous areas, though, equine centres have been developed to cater for the needs of the large numbers of tourists, offering horse lovers the opportunity to take riding lessons or go for a walk in the forest. Local entrepreneurs are trying to combine agritourism with

equine tourism. However, they are still in the early stages because their skills of giving riding lessons and their knowledge of horses, need to be combined with the patience and imagination required in dealing with potential customers and with the ability to attract financial resources. It is notable that riding lessons for children, horseback riding, and generally spending free time near stud farms, especially near big cities, as an escape from everyday life, bringing moments of relaxation and communion with nature, have become very popular in recent years.

The equine sector brings new people, both customers and potential entrepreneurs, from urban to rural areas. The equine industry is among the fastest-growing industries, being the most promising industry in the rural context. What makes the equine industry so special is the interaction between rural and urban (Rantamäki-Lahtinen & Vihinen, 2004).

A person's age, as a measure of experience, has a significant influence on their adoption of agritourism activities, although above a certain age the probability of engaging in agritourism activities may decrease (Loureiro et al., 2005). Agritourism is a rapidly growing segment, offering many experiences. Equine tourism is the journey comprising all the activities that have the horse as a starting point. Depending on the activities and context, it has connections with, and can be interpreted as, sports tourism (Tennstedt, 2008), adventure tourism (Hackbert et al., 2009), ecotourism (Ollenburg, 2005), nature-based tourism, agritourism (Himmel, 2008), and cultural tourism (Helgadottir, 2006).

One advantage that Romania has over other countries is the approximately 2500 wild horses in the Letea Forest. These horses are not part of a service-providing business as such, but they have helped to develop tourism in the area. Having wild horses alongside opportunities for recreation with domestic horses can be a big plus, especially by creating riding camps. In Romania, a survey conducted by Ciolac et al. (2019) showed that capitalising local resources and products by combining two activities could prove highly profitable: the equine services as a core activity and the equine-related tourism activity as a complementary activity.

Empirical evidence shows that equine entrepreneurs are aware of the importance of creating and managing agritourism ventures in ways that enable social cohesion, equitable resources distribution, and a respect for environmental limits (Paniccia & Baiocco, 2020).

Recreation / equine sports

Humans first saw the horse as a source of energy and later as a symbol of power, a tool of support and a helper in doing work. Although the horse-human relationship has changed over time, the attraction that people felt for horses has remained constant. The horse-human relationship has changed further in this new millennium, being present in our lives as an important element in leisure and sports (Castejón Montijano & Rodríguez-Fernández, 2009).

Equine sport involves different kinds of riding. A distinction is made between recreational riding and horseback riding in official competitions. Several different types of enterprises are present within sports and recreation, namely: sports stable,

training stable, stable farm, livery yard, riding school and group accommodation (Mennink, 2010).

The financial and commercial value of sports horses is constantly rising, the expectations of breeding and performance are increasing, and the expanding equine industry is providing a proliferation of products and services to horse enthusiasts (Gilbert & Gillett, 2011). Equestrian sport has become progressively more commercialized, with a focus on quick returns on investment for sponsors, horse owners and, consequently, riders (Dashper, 2014).

Equine sport is the largest contributor in this sector to the EU economy (European Parliament report, 2017), with a range of spectacular events being watched by the general public. Riding centres are a niche business in this industry, given that the sport is relatively expensive, and was historically pursued only by elites. Innovation in equine recreation and sports is less developed than in other industries, so many opportunities remain to be grasped (Berggren, 2018).

Therapeutic horse riding

Diversification and flexibility are important factors that affect the resilience of a business focused on therapeutic horse riding. Where it can offer various services and products, or access various complementary sources of income, it will survive more easily in times of crisis (Korpa et al., 2013).

Other studies show the strong connection between horses and children, especially for those children with emotional or medical problems, which is why horses are used in therapies to remedy or treat these problems (Christian, 2005).

Therapeutic riding emerged in ancient times, when Hippocrates supported and recommended the benefits of the rhythm of the horse for the sick rider. Hippotherapy has been practised since 1960 in many countries in Europe and around the world. It is usually provided by a physical therapist or occupational therapist in order to use the movements of the horse to improve balance, posture and gross and fine motor skills.

Echinotherapy aims to improve the mind, health and development, using an experiential approach (Karol, 2007). The therapist encourages clients to use the horse as a mirror, gaining a unique new perspective on their own emotions and behaviour. (Brandt, 2013).

The horse acts as a social facilitator and can make quite a strong connection with the client (Fine, 2010). Such therapy can be an effective strategy for improving motor, social and adaptive functioning, while reducing unwanted stereotypical behaviour, especially in young people with certain disorders, such as autism (Kern et al., 2011).

Horse therapy has also been successful in increasing social, psychological and academic levels, reducing anxiety disorders and post-traumatic stress resulting from intra-family violence (Schultz et al., 2007). Therapeutic riding emphasises control, attention and focus, sensory management, and communication in order to teach riding skills. It provides a multisensory experience and has been part of the value propositions of many equine start-ups (Ward et al., 2013; Srinivasan et al., 2018).

Fig. 1 – Research conceptual model

Conceptual framework

The conceptual model (Fig. 1) outlines the antecedent conditions—agritourism, sport and the therapeutic activities strongly connected to entrepreneurial options within the equine sector—of entrepreneurial intentions, i.e., of starting a business, in one or more of these activities.

The purpose of the research is to investigate whether there are combinations of antecedent conditions necessary for the development of a durable and sustainable business in the equine sector in Romania.

Each condition of the adapted model, referred to as antecedent conditions, was evaluated by a 5-point scale: from "strong disagreement" to "strong agreement". The same method was used for the outcome. The measurement scales have been developed by reference to the relevant references from the equine entrepreneurship body of knowledge.

Methodology

We selected fsQCA for this study after a comprehensive mapping of fsQCA applications in entrepreneurship research (Kraus et al., 2018). It is the one method that can be used with small, medium and large-sized samples, and it can bridge the gaps between qualitative and quantitative analysis (Ragin, 2008).

fsQCA provides a novel method of comparing and contrasting entrepreneurial performance in a specific sector (in this case, the equine sector), capable of relating entrepreneurial intentions to sets of entrepreneurship drivers (Rihoux & Ragin, 2008; Beynon et al., 2016).

Data collection

The data collection for this paper involved field research and the study of literature. The field research involved a) visiting several stud farms, b) gathering information from professionals working in the field and c) a questionnaire administered online. The questionnaire was completed by 70 horse enthusiasts, in different areas of activity, across Romania, available at this address: <https://forms.gle/am853277cR3QGyqu7>.

We have selected only horse enthusiasts in our convenience sample. We consider that they have a higher propensity to entrepreneurship than people without that enthusiasm. They were approached through social media groups dedicated to horse enthusiasts. The online questionnaire was distributed despite its timing during the Sars-Cov-2 pandemic, as the entrepreneurial interest continued to be shown during this period.

The characteristics of the respondents are shown in Table 1 and 2.

FSQCA Methodology

Qualitative Comparative Analysis (QCA) is a method capable of reducing the gaps between qualitative and quantitative analysis (Ragin, 2009). It allows the evaluation of multiple causal configurations, usually confirming that a combination of conditions generates a result. However, several combinations of conditions may produce the same result, or a given condition may have a different impact on the outcome depending on the context (Ragin, 2014).

QCA is used when the researchers introduce conditions that are sufficient (but not necessary) to determine an outcome status. Using measures of consistency

Table 1 Sample demographics.

Characteristic		Percentage
Gender	Male	52.9%
	Female	47.1%
Age Group	less than 20 years old	4.3%
	between 20 and 35 years old	48.6%
	between 36 and 50 years old	32.9%
	older than 50 years	14.3%
Location	Urban	71.4%
	Rural	28.6%
Entrepreneurial experience	Yes	48.6%
	No	51.4%
Accessing European funds	Yes	11.4%
	No	88.6%

Source: authors

Table 2 Main constructs used in the conceptual model

Acronym	Condition description	Source
Antecedent conditions		
<i>AGT – agritourism activities</i>	I consider that there are many opportunities for financing business ideas in agritourism involving equine activities	Nickerson (2001)
	I set up an agritourism complex, and then, later, identified a business opportunity in the equine field	Notzke (2019)
	Equine tourism is a growing sector and has great potential for the Romanian economy	Paniccia and Baiocco (2020)
AS – sport activities	I have participated in equine competitions and consider that an entrepreneurial career oriented towards organising such competitions is attractive for me	Berggren (2018)
	I believe that establishing an equine business involving competition will attract investors in a short time	Gilbert and Gillett (2011)
	The organisation of an international equine competition will support the development of local entrepreneurship	Wicker et al. (2012)
ATER– therapeutic activities	Significant demand exists for hippotherapy services in Romania and I am thinking of establishing a business in this field	Korpa et al. (2013)
	I anticipate the emergence of business ideas and financing programmes for services dedicated to people with disabilities, such as hippotherapy	Srinivasan et al. (2018)
	There are opportunities in hippotherapy that can be facilitated by accessing non-reimbursable funds for social entrepreneurship	Rantala et al. (2019)
Outcome		
EI – entrepreneurial intention	I have a clear intention to start a business in the equine sector in the near future	Angriawan et al. (2012)

Source: issued by the authors

and coverage, this method provides accurate information on how causal configurations explain a particular outcome (Woodside, 2010). QCA analysis involves transforming raw responses into fuzzy sets.

FsQCA is very suitable for dealing with the complexity of the entrepreneurial phenomena because it uses an inductive research method based on the principles of conjunction, equifinality and causal asymmetry (Douglas et al., 2020).

The first step in fsQCA is choosing the antecedent conditions to be included in the configuration model. All conditions included in the model should have a theoretical or strong empirical reason for being included (Greckhamer et al., 2018).

The next step of fsQCA is to calibrate the data according to the procedure described by Ragin (2009). Researchers must rely on existing theories and information to establish appropriate anchor points for calibration and to assess the degree of affiliation of each variable. In general, the fuzzy scores set for the antecedent conditions range from 0.00 to 1.00.

fs / QCA 3.0 (Ragin, 2014) was used in this study, offering the researchers the opportunity to identify several pathways that can explain the same result (Pappas et al., 2017).

Data calibration

Assuming that the motivations to reorientate one’s behaviour in an entrepreneurial direction vary from one horse enthusiast to another, we consider alternative combinations of causal conditions, interpreted as determinants of, or barriers to, such behaviour, which can lead to the outcome in the end.

In this way, we used a fuzzy set calibration approach to model the degree to which different cases in the research sample belong to a set, ranging from 0 to 1, with intermediate levels (Ragin, 2000). Table 3 shows the calibration of the causal conditions (5-point scale: from total disagreement to total agreement) and outcome (point scale: from total disagreement to total agreement), and their values in the specific evaluation scales.

Table 3 Calibration of scales

Scale point	Fuzzy-set value	Membership
Total disagreement	0	Fully out
Disagreement	0.25	More out than in
Neutral	0.50	Cross-over (neither in nor out)
Agreement	0.75	More in than out
Total agreement	1	Fully in

(adapted from Ragin, 2000)

Fig. 2 Distribution of cases within the XY Plot graph. Source: fsQCA software output

A new variable (*GTSTER*) was created as the result of calculating the fuzzy-set value of the antecedent conditions from the conceptual model (*AGT*, *AS*, *ATER*), using fsQCA software:

GTSTER = fuzzyand (*AGT*, *AS*, *ATER*).

The study transforms the values for the causal conditions (agritourism activities, sports activities, therapeutic activities) and the outcome (entrepreneurial intention) into fuzzy-set scores between 0.1 and 1.00. The study established three qualitative categories for calibration: a category for agritourism enthusiasts, a category for equine sports enthusiasts, a category for hippotherapy activities, and a crossing point.

Research results

The first step of the analysis aims to identify which configurations can be sufficient for the entrepreneurial intention to be satisfactory.

For a configuration to be considered sufficient, the consistency measure should exceed a minimum threshold of 0.75 (Woodside, 2014), which can be assessed

Table 4 Truth table analysis for the research sample.

Complex solution	Raw coverage	Unique coverage	Consistency
sport activities* therapeutic activities	0.93299	0.93299	0.845794
Solution coverage: 0.93299			
Solution consistency: 0.845794			

Source: fsQCA software output

Table 5 Configurations of parsimonious conditions.

Parsimonious solution	Raw coverage	Unique coverage	Consistency
~sport activities	0.534884	0.162791	0.779661
~therapeutic activities	0.453488	0.0813953	0.829787

Solution coverage: 0.616279

Solution consistency: 0.80303

Source: fsQCA software output

by analysing consistency and coverage scores on XY plots with the fuzzy set (Fig. 2).

The visual representation of the cases on the XY graph reveals that the antecedent conditions are sufficient for the outcome: 22 cases of the 70 are above the diagonal, while 26 cases are on the diagonal and 22 are below the diagonal.

The consistency score is 0.845794, while the coverage score is 0.93299. These scores imply that the distribution of fuzzy sets is very consistent with the statement that GTSTER is a subset of the outcome (IA: entrepreneurial intention), the GTSTER coverage of the result (IA) being 93.3%

Although the values of consistency and coverage suggest causality between the cases in this configuration, in-depth analysis should be performed in order to obtain the complex solution using the fsQCA truth table component.

The truth table reveals different case configurations by listing all possible logical combinations of causal conditions and analysing sufficient conditions. In our case, a configuration was detected in the research sample, taking into account only cases where the consistency is greater than 0.8 (Table 4).

The truth table empowers researchers to analyse different case configurations by listing all the combinations of causally relevant conditions and analysing sufficient conditions. The analysis of sufficient conditions always leads to the outcome if at least one row of the truth table is connected to the outcome.

The truth table allowed the interpretation of the complex solutions in both tests, offering successful formulae for the expected result.

The complex solution offered by the Quine-McCluskey algorithm emphasises that sports and hippotherapeutic activities are the strongest indicators of entrepreneurial intention (Table 4).

For this research sample, the complex and parsimonious solution offered by the Quine—McCluskey algorithm reveals that a single causal configuration of the antecedent conditions leads to the outcome, (Table 4). The values related to consistency scores are higher than the recommended threshold of 0.75 (Ragin, 2006).

We also examined the negative result with fsQCA ~IA=f (AGT, AS, ATER) (Pappas et al., 2017), which tests the poor intention or lack of intention to create a business in the equine sector. (Table 5).

We can observe that no combination of the three causal negated conditions can affect the negated outcome.

We expected to see that different combinations of antecedent conditions would affect the outcome, entrepreneurial intentions in the equine sector, in line with

the fsQCA equifinality principle. Our findings reveal that a single combination of two antecedent conditions leads to this outcome. A future study, after the pandemic, might provide new insights into the combinations of conditions enabling the entrepreneurial intentions in equestrian activities.

Discussion, conclusions and implications

The equine sector comprises several different activities, ranging from the agricultural sector to leisure, tourism and rehabilitation.

Building a business in this field starts from a base of a core of activities. To go further, the proprietor must choose a manageable set of performance indicators that include all the principles of equine activity—social cohesion, rural economic development, business development, health, education, employment and tourism.

Cooperation, in itself, can be good innovative practice for the entrepreneur. Collaborative innovation in a product or service can help all parties to adapt to new changes and entrepreneurial conditions.

The complex solution offered by the Quine-McCluskey algorithm demonstrates that a combination of the antecedent conditions specific to sports and therapeutic activities largely influence the outcome, i.e., entrepreneurial intent in the equine sector (solution coverage: 0.9329, solution consistency: 0.8457).

Our first finding, that sports and therapeutic activities are more attractive for entrepreneurship than agritourism, is consistent with those reported by Berggren (2018). He argued that equestrian sports are surrounded by products and services that support value propositions around horse and rider. This includes horsemanship skills that develop the child's bond with their horse, a view supported by Srinivasan et al. (2018), who suggest that there are valuable entrepreneurial opportunities in riding lessons that focus on enhancing children's motor, social communication, emotional, and cognitive skills.

The Sars-Cov-2 pandemic depressed interest in agritourism; it generated economic instability and low confidence in setting up a business in tourism. It is noteworthy that potential entrepreneurs became more oriented towards outdoor equine sports during this period, especially in the forests near cities. The hippotherapeutic activities also had to stop during the quarantine period, but they restarted when lockdown ended.

Our second finding is that another reason why entrepreneurs have focused more on equine sports and hippotherapy than on agritourism is the fact that agritourism cannot happen just anywhere, as accommodation and catering facilities are not always readily available, which leads to much higher costs and local shortages of labour. Agritourism involves the use of one's own household resources for accommodation and meals, participation in specific household activities and compliance with all legal operating formalities. By contrast, equine sports or the use of horses for hippotherapy can be done using existing facilities and equipment, the emphasis being mainly on horses and their maintenance.

Thirdly, it is interesting to note that more than 50% of respondents were between 20 and 35 years old. In general, this age group is not very interested in agritourism, but rather in active tourism.

In conclusion, we consider it important to realise that entrepreneurship in the equine area is not easy to achieve, because it is strongly influenced by geographical location, financial resources, knowledge of the equine field and potential customers in that area. However, this sector has a lot of potential due to its capacity for generating social, sustainable and rural development impacts.

Limitations and further research

This study examined the intention to engage in entrepreneurial behaviour among horse enthusiasts, while acknowledging that intentions often do not turn into actions.

The future of entrepreneurial behaviour in this area is a sensitive issue due to the difficulty of obtaining funding for this activity.

This research is an empirical measurement of entrepreneurial intentions in the equine sector, and it can contribute to the development of social entrepreneurship through the involvement of horses in socio-economic activities.

In the future, we aim to carry out a qualitative study based on in-depth interviews in order to identify all the complex aspects of the entrepreneurial intentions of horse enthusiasts. It would be interesting to note the entrepreneurial intent of the same respondents under different economic assumptions, free of the pandemic.

Since the traditions of horse breeding are unique to a particular social context and bound up in household and family histories, equine entrepreneurs must consider family heritage while searching for new venture opportunities (Fitz-Koch et al., 2018). Therefore understanding entrepreneurship in the family equine business might be a significant avenue of future research on this area.

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