

PRACTICAL ASPECTS OF BUSINESS MODEL APPLICATION IN VETERINARY ACTIVITIES

Lina Ašmenskaitė¹, Adelė Astromskienė²

¹Lithuanian University of Health Sciences

²Aleksandras Stulginskis University, Lithuania

lina.asmenskaite@ismuni.lt; adele.astromskiene@asu.lt

Abstract

In the article, following the theoretical aspect, there is analyzed the business model canvas and there is presented the business model classification involving the discussion related to the particularity of veterinary activities. The research aim is after having summarized theoretical aspects of business models, to disclose business model application peculiarities in veterinary activities. In order to disclose the business model application peculiarities in veterinary activities and to supplement the research by other authors, there was disclosed the peculiarity of veterinary service and there was completed the most relevant business model analysis allocated to the development of veterinary activities. Having systematized the business models introduced in different sources it was noticed that there had not been found any business models which were named as ones being unambiguously relevant to veterinary activities. There have been accurately analyzed application possibilities of the *business model canvas* for the analysis and development in veterinary service activities.

Key words: business model canvas, veterinary activities, veterinary service.

Introduction

In the scientific literature there are provided a lot of different interpretations of business model canvas. Timmers (1998) defines a business model as architecture of product, service and information flows that involves business participants and their roles, the identification of income sources and the determination of potential benefits for business participants. Linder and Cantrell (2000) define a business model as organizational logic, following which, there is created new or higher value. The scientists, Magretta (2002), Zott and Amit (2010), Beattie and Smith (2013), define a business model as a story that explains the operation principle of a company. Teece (2010) indicates that a business model discloses the fact related the transformation of the company income and its possibilities into some economical value. Osterwalder and Pigneur (2005; 2010) describe a business model as a conceptual means that includes elements, their correlative relations and that enables the definition of business logic in the certain company. Casadesus-Masanell and Ricart (2010) describe a business model as company logic, data and other details which maintain the value proposal for a customer, income

framework and company costs. Chesbrough and Rosenbloom (2002) claim that a business model is business logic which creates value form new service or products. A business model discloses the fact how value is created to a customer and how the following proposal secures financial benefit or network value for a company or the interested parties (Bouwman et al., 2008; Haaker et al., 2006).

The versatility of entrepreneurial activities and business model definitions and classifications is closely interrelated. In the Table 1 there is presented the business model classification by several authors:

However, general business models and their descriptions are not always relevant for particular entrepreneurial activities. One of the particular/specific entrepreneurial activities is veterinary activity. Veterinary activity has an exclusive quality among other entrepreneurial activities, providing services – different level and role participants in the service design process. Veterinary service is provided to animals and the customer is the service purchaser. Besides, the following service requires a high customer's participation level when a customer (service purchaser and animal owner) and service

Table 1

Business Model Classification

Author	Business Model Types
Linder and Cantrell, 2000	Intermediate, broker, direct sales to s customer and other business models
Rappa, 2001	Broker, producer trader, partner and service focused business models: advertising agencies, information communication intermediate and internet service supplier
Alt et al., 2001	Business models, focused on different markets and company roles Business models, focused on income generation Business models, focused on sectors and industries
Michelini, 2012	Isolated and interactive business models

supplier (a person engaged in the veterinary practice) share the information, knowledge and efforts, necessary for the design of qualitative service.

The business model application in veterinary activities has not been widely analyzed yet. In order to remain competitive in a constantly changing entrepreneurial environment, veterinary service suppliers have to be able to cognize business models and be able to adapt them constantly not only in a changing business environment, but be able to conform with constantly changing veterinary service purchasers' needs.

The research aim is after having summarized theoretical aspects of business models, to disclose business model application peculiarities in veterinary activities.

Materials and Methods

The article has been prepared applying the methods of scientific literature analysis, general and logic analysis, generalization and comparison. The business activities run by economical subjects, those provide veterinary service in Lithuania, were selected as a research object. The analysis of scientific literature involved scientific article search and the analysis of their contents in the following educational data bases: „EBSCO Publishing“, „Emerald Management eJournals Collection“, „Scencedirect“, and Google Scholar. Articles are selected according to the key word „business model“.

Results and Discussion

Veterinary activities are a kind of service provided by the veterinary service supplier to the animal keeper for the fee or voluntarily: a consultation concerning animal welfare and health issues, diagnostics, treatment and prophylaxis against animal diseases, temporary animal accommodation and care in terms of treatment in the veterinary service supplier's premises, animal marking, the identification of animal death causes, etc. Following the classifier of economic activities, the structure of veterinary activities consists of: inpatient treatment of livestock and animals, outpatient treatment of livestock and animals, veterinary diagnostic activities and veterinary lab activities (Statistics Lithuania, 2008).

Recently, there are predominant complex and intensive changes in the veterinary sector, that impact business environment of veterinary service. Some of them are related to the security of animal welfare and others are related to the increase of domestic (small) animal/companions number and the decrease of farm animals (Lowe, 2009). Agreeably with the data of the European Pet Food Industry Federation, in the year 2007, 350 thousand dogs and 270 thousand cats were kept in the households of Lithuania, respectively in

the year 2012 – 740 thousand dogs and 670 thousand cats, i.e. the number of dogs and cats increased more than twice. Following the research, completed in Germany, 87% of dog keepers regularly purchase veterinary service and check-up their companions not less than once a year, and 27% of dog keepers visit veterinary surgeons three times and more a year. Meanwhile, only 9% of cat keepers check-up their animals three times a year, and 30% - have no regular visits to veterinary surgeons. The following fact sets new requirements for veterinary service suppliers: to attract more domestic (small) animal raisers and to provide them with more and better quality service.

Agreeably with the regulations of the Lithuanian Veterinary Law, legal entities and natural persons, who have been concurred the veterinary surgeon's qualification and veterinary practice license, can deliver veterinary service in Lithuania. The veterinary service supplier can be both – a private veterinary surgeon and a company, where there are employed private veterinary surgeons and that provides with veterinary service. According to the data of Statistics Lithuania, in the year 2015, 159 economical subjects run veterinary service supply and in comparison with 359 companies, providing veterinary service in the year 2009, their number decreased more than twice.

During the execution of veterinary activities in Lithuania, there are applied obligatory standards for service and safety to private veterinary service suppliers in Lithuania – licenses, which confirm employees competencies and permits, which confirm the service supplier's competence and the relevance of buildings/premises. Following the data of Lithuanian State Food and Veterinary Service, in the year 2015, the licensed veterinary practice was executed by 1970 natural persons, and 995 natural persons had licenses for veterinary pharmaceutical practice; one license is issued for production of drugs; 159 licenses are possessed by the executors of veterinary pharmacy activities and 49 licenses are possessed by economical subjects involved in veterinary medicine trade in bulk.

During the analysis in the change of veterinary companies according to the number of the employed, it can be noticed that in the year 2015 as well as in the previous years the largest group of companies are and used to be very small companies, i.e. the companies that employ up to 4 people and they make 76.7% of all operating companies (see Table 2). In the year 2015, the company structure according to the groups of the employed has not changed at all in comparison with the year 2014.

At the beginning of the year 2015, there have been employed 700 people in veterinary service companies. During the period of six years, their number has decreased almost three times in comparison with the

Table 2

**The distribution of the active veterinary company number in accordance
with the number of the employed**

Year	Classification of companies agreeably with the number of the employed			
	0-4 employees	5-9 employees	10-19 employees	20-24 employees
2012	125	24	9	5
2013	110	21	6	5
2014	106	27	7	5
2015	122	21	12	4

Source: the Lithuanian Statistics..., 2015

year 2009. The situation when the number of domestic (small) animals in Lithuania is significantly increasing annually and the number of the specialists providing service to them and sales of veterinary service are decreasing rapidly, forces to find out the causes for the following disproportion. One of the reasons can be the veterinary service suppliers' age. During the analysis of demographic indicators related to the veterinary surgeons, running veterinary practice, it was identified that 69.4% of the physicians, running private veterinary practice are at the age of 51-60 and only 2.8 of physicians are younger than 40. Under the data of the Lithuanian Veterinary Association, average age of the private veterinary surgeon, who works with farm animals, is 54. Being aware of the fact that 20 and more years ago, veterinary studies were focuses on the farm animals' healthcare, domestic (small) animals' service is a new activity for the veterinary surgeons at the senior age, and that activity requires supplementary knowledge, means and experience. I.e. that the previous veterinary activity model does not suit anymore. There arises an objective for scientists to find and adapt business models relevant to the changing character of veterinary activities.

In order to identify business model application peculiarities in veterinary activities there was completed the comparative analysis of some scientific research, related to the interpretation of business model structure. Analyzing scientific literature it was noticed that in definition case of the business model canvas, the scientists' research can be divided into several categories:

- Research focused on a business model canvas (Casadesus-Masanell and Ricart, 2010; Linder and Cantrell, 2000; Magretta, 2002; Osterwalder and Pigneur, 2005; Timmers, 1998);
- Research focused on the business model structure elements (Afuah and Tucci, 2002; Osterwalder and Pigneur, 2005; Petrovic et al., 2001; Rayport and Jaworski, 2001; Weill and Vitale, 2001);
- Research in the representation methods for a business model (Casadesus-Masanell and Ricart, 2010; Osterwalder and Pigneur, 2005; Tapscott et al., 2000; Weill and Vitale, 2001);

- Research in business model development methods (Morris et al., 2005; Osterwalder, 2004; Pateli and Giaglis, 2004);
- Business model innovations (Linder and Cantrell, 2000; Petrovic et al., 2001; Sosna et al., 2010).

The versatility of theoretical business models enables the selection of the most relevant ones for the development of veterinary activities. Having assessed the peculiarities of veterinary activities as specific service business with the participants in several levels of the service design process, the most relevant models are the ones those enable the definition and exclusion of the model relevance criteria:

- Service value for animal keepers agreeably with their relationship with an animal;
- Veterinary service consumers in the target market according to the kinds of the kept animals;
- Veterinary service suppliers' internal possibilities – available competencies and licenses for veterinary activities;
- Competitive strategies – veterinary service suppliers' interpersonal relationship in the certain locations;
- Economical activity logic – the identification of service profitability limits and price level;
- Personal factors – interest in separate animals' biology and ethology, possibilities of communication, the level of entrepreneurship, etc.

The enumerated criteria most relevantly comply with business model structure elements excluded by M. Morris, M. Schindehutte, & J. Allen (2005): value proposal (describes how a company creates a new value for the interested persons), target market (describes a value that a company offers to consumer segments), internal possibilities (the company possibilities/internal potentials and competences), competitive strategies (security of competitive advantage), economical activity logic (involves all economical aspects in a company) and personal factors (time and ambitions). Following these criteria there was carried out the comparison of business model relevance for veterinary activities (Table 3):

The analysis of business models has disclosed that there have not been noticed any business models

Table 3

Selection of Business Model Relevance for Veterinary Activities

Authors	Business Model Structure Elements					
	Value Proposal	Target Market (consumers)	Internal Possibilities	Competitive Strategy	Economical Activity Logic	Personal Factors
Mahadevan, 2000	+		+		+	
Alt and Zimmermann, 2001	+	+	+	+	+	+
Petrovic et al., 2001	+	+	+		+	
Chesbrough and Rosenbloom, 2002	+	+	+	+	+	
Hedman and Kalling, 2001	+	+	+	+		
Morris et al., 2005	+	+	+		+	+
Osterwalder, Pigneur, 2005	+	+	+	+	+	
Johnson et al., 2008	+	+	+		+	
Al-Debei and Avison, 2010	+	+	+		+	
Demil and Lecocq, 2010	+	+	+		+	
Kijl and Boersma, 2010	+	+	+	+	+	
Onetti et al., 2010	+	+	+	+	+	
Kindström, 2010	+	+	+		+	
McGrath, R. G. 2010	+		+		+	
Zott and Amit, 2010	+	+	+			
Teece, 2010	+	+	+			
Zott et al., 2011					+	

those were named as unambiguously relevant ones for veterinary activities. There are most frequently discussed processes and the creation of the value proposal in business models focused on the service supply; however, there is not analyzed customer feedback (Uvarina, 2013) and this is an inseparable part of veterinary service in veterinary activities: animal's keeper is like an intermediate between the veterinary service supplier and its receiver (consumer). The veterinary service supplier receives information concerning the service relevance not from the service receiver but from its purchaser – animal's owner or raiser.

Following the research authors' attitude, *business model canvas* by Osterwalder and Pigneur (2009) was selected for the description of entrepreneurial aspects in veterinary activities as the most relevant one. Under the analyzed business models, the following model structure and its elements enable the expression of entrepreneurial logic in veterinary activities and business particularity in a company that supplies veterinary service best. *Business model canvas* structure consists of the following elements: consumer segment, value proposal, distribution channels, consumer relationship, key activities, key resources, key partnerships, the structure of costs and income flows. Besides, in the following business model there can be excluded two most significant

dimensions those impact income flows of the subjects (natural persons or companies) those provide with veterinary service:

- *Human resources, their activities and the created value in the system of service.* Veterinary service and its supply process depends not only on people's (the physicians, who run veterinary practice and the employed in veterinary companies) professional competencies a lot, but on their entrepreneurship, helpfulness, attentiveness to a customer and animal, and an ability to communicate. The following personal veterinary service suppliers' characteristics/qualities are the key element of successful entrepreneurial activities.
- *Contact maintenance (feedback).* One of the most significant elements of *Business model canvas* is the focus on a customer. The creation of tight business relations among specialized veterinary service suppliers and the creation of veterinary tool distributors in veterinary activities, secure successful activities for all veterinary surgeons, running veterinary practice. In the following case, the focus on the customer involves the employees' in a company that provides with veterinary service and separate physicians', who provide with veterinary service directly, efforts in communication with animal keepers in order to identify the need of the help necessary for an

animal; supply processes of the very veterinary service and supplementary services under the aid of which there is formed the feeling of reliability, closeness, and emotional strength. If an animal owner during the supply of veterinary service for an animal, experiences more positive than negative emotions, such an animal owner will turn into a permanent veterinary service supplier's customer and he/she will use the service repeatedly and will recommend it to potential customers – other animal keepers. In summary it can be stated that *Business model canvas* can be applied for the analysis of veterinary service business, the structure elements of which involve all veterinary activity processes and enable the analysis of separate structural parts of veterinary service supply process and discloses creation peculiarities of exclusive attention and veterinary service value to customers and consumers, excluding the animal owners' and the service animals' role and place in the development process of veterinary service supply.

Conclusions

1. The literature analysis in a business model discloses that there is no existent the only and steady definition of a business model. In order to disclose the business model application peculiarities in veterinary activities and supplement other scientists' research, there is necessary a deeper and more systematized review of business model canvas and structure elements in order to be able to provide with purer structure elements of a business model.
2. Veterinary activities possess an exceptional quality – the participants of different levels and
3. The completed business model relevance analysis for veterinary activities discloses the fact that there have not been noticed any business models those were named as ones being unambiguously relevant for the analysis and development of veterinary activities. One of the most relevant models is *Business model canvas* that enables the disclosure of peculiarities related to the creation process of exclusive attention and different level and role of veterinary service value and service for the process participants, excluding the role and place of animal owners and the service animals in the development process of veterinary service supply.
4. The further research in veterinary entrepreneurship could be developed in the following directions: in the direction business model practical analysis, in the direction business model classification and application in order to exclude the certain factors of success, those impact the development of the following specific activity positively.

References

1. Afuah Allan, Tucci C.L. (2002) *Internet business models and strategies: text and cases* (2nd ed.), McGraw-Hill Higher Education, 480 p.
2. Al-Debei M.M., Avison D. (2010) Developing a unified framework of the business model concept. *European Journal of Information System*, 19(3), pp. 359-376.
3. Alt R., Zimmermann H.D. (2001) Preface: Introduction to Special Section – Business Models. *Electronic Markets*, 11(1), pp. 3-9.
4. Beattie V., Smith S. (2013) Value creation and business models: refocusing the intellectual capital debate. *The British Accounting Review*, 45(3), pp. 243-254.
5. Bouwman H., Haaker T., De Vos H. (2008) *Mobile service innovation and business models*, Springer, New York, 325 p.
6. Casadesus-Masanell R., Ricart J.E. (2010) From strategy to business models and onto tactics. *Long Range Planning*, 43(2-3), pp. 195-215.
7. Chesbrough H. (2010) Business model innovation: opportunities and barriers. *Long Range Planning*, 43(2-3), pp. 354-363.
8. Chesbrough H., Rosenbloom R.S. (2002) The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change*, 11(3), pp. 529-555.
9. Demil B., Lecocq X. (2010) Business Model Evolution: In Search of Dynamic Consistency. *Long Range Planning*, 43(2-3), pp. 227-246.

10. Haaker T., Faber E., Bouwman H. (2006) Balancing customer and network value in business models for mobile services. *International Journal of Mobile Communications*, 4(6), pp. 645-661.
11. Hedman J., Kalling T. (2001) *The Business Model: A Means to Understand the Business Context of Information and Communication Technology. Working Paper No. 9*, Lund: Institute of Economic Research in the School of Economics and Management at Lund University, pp. 148-162.
12. Johnson M.W., Christensen C.M., Kagermann H. (2008) Reinventing your business model. *Harvard Business Review*, 86(12), pp. 57-68.
13. Kijl B., Boersma D. (2010) Developing a business model engineering & experimentation tool – the quest for scalable ‘lollapalooza confluence patterns. Paper 567, In: *Proceedings of the Sixteenth Americas Conference on Information Systems (AMCIS 2010)*, Lima, Peru, pp. 1-13.
14. Kindström D. (2010) Towards a service-based business model – Key aspects for future competitive advantage. *European Management Journal*, 28(6), pp. 479-490.
15. Linder J., Cantrell S. (2000). Changing business models: surveying the landscape. Accenture Institute for Strategic Change, UK: Cambridge, pp. 1-15.
16. Lowe P. (2009) *Unlocking Potential – A Report on Veterinary Expertise in Food Animal Production*, Department for Environment and Food Rural Affairs (DEFRA), London, 90 p.
17. Magretta J. (2002) Why business models matter. *Harvard Business Review*, 80(5), pp. 86-92.
18. Mahadevan B. (2000) Business models for internet-based E-commerce. *California Management Review*, 42(4), pp. 55-70.
19. McGrath R.G. (2010) Business Models: A Discovery Driven Approach. *Long Range Planning*, 43(2-3), pp. 247-261.
20. Michelini L. (2012) *Social Innovation and New Business Models*, Springer, London, UK, 90 p.
21. Morris M., Schindehutte M., Allen J. (2005) The entrepreneur’s business model: toward a unified perspective. *Journal of Business Research*, 58(6), pp. 726-735.
22. Onetti A., Zucchella A., Jones M., McDougall-Covin P. (2010) Internationalization, innovation and entrepreneurship: business models for new technology-based firms. *Journal of Management and Governance*, 15(3), pp. 1-32.
23. Osterwalder A. (2004) *The business model ontology – a proposition in a design science approach*. Business. PhD Thesis, Universite de Lausanne: Ecole des Hautes Etudes Commerciales HEC, 173 p.
24. Osterwalder A., Pigneur Y. (2005) Clarifying business models: origins, present, and future of the concept. *Communications of the Association for Information Systems*, 16(1), pp. 1-25.
25. Osterwalder A., Pigneur Y. (2010) *Business model generation*, Hoboken, Wiley, New Jersey, 278 p.
26. Pateli A.G., Giaglis G.M. (2004) A research framework for analysing eBusiness models. *European Journal of Information Systems*, 13(4), pp. 302-314.
27. Petrovic O., Kittl C., Ryan D.T. (2001) Developing business models for ebusiness. In: *International Conference on Electronic Commerce (ICEC) 2001*, Vienna, Austria, pp. 1-6.
28. Rayport J., Jaworski B. (2001) *E-commerce*, McGraw-Hill/Irwin, New York, 456 p.
29. Sosna M., Treviño-Rodríguez R.N., Velamuri S.R. (2010) Business model innovation through trial-and-error: learning the Naturhouse case. *Long Range Planning*, 43(2-3), pp. 383-407.
30. Tapscott D., Ticoll D., Lowry A. (2000) *Digital capital: harnessing the power of business webs*, Harvard Business School Press, Cambridge, MA, 320 p.
31. Teece D.J. (2010) Business models, business strategy and innovation. *Long Range Planning*, 43(2–3), pp. 172-194.
32. Timmers P. (1998) Business models for electronic markets. *Electronic Markets*, 8(2), pp. 3-8.
33. Uvarina J.A. (2013) Business Model Working Diagram for a Service Oriented Company. *World Applied Sciences Journal*, 26(10), pp. 1261-1266.
34. Weill P., Vitale M. (2001) *Place to space: migrating to e-Business models*, Harvard Business School Press, Boston, 372 p.
35. Zott C., Amit R., Massa L. (2011). The business model: recent developments and future research. *Journal of Management*, 37(4), pp. 1019-1042.
36. Zott C., Amit, R. (2010) Business model design: an activity system perspective. *Long Range Planning*, 43(2-3), pp. 216-226.