

DEJAN KRSTEVSKI¹

GJORGJI MANCHESKI²

**SMEs OPEN INNOVATION MANAGEMENT:
STRATEGY MAP FOR INNOVATION DRIVEN COMPANY**

Abstract

Over the last few years the open innovation paradigm has gained significant attention among many researchers who are studying on strategic management and innovation. Current research emphasizes that companies adapt their business models to profit not only from internal but also from external knowledge and ideas. The aim of this article is to help the management team to cope with the use of the balanced scorecard for implementation of open innovation strategies in small and medium-sized enterprises (SMEs). One of the ultimate goals is the construction of strategy map and inclusive measures of open innovation management. The implementation of open innovation strategies in small and medium-sized enterprises is a complex, mental and a highly professional activity that is directed towards the determination of the future objectives for the company growth. Hence, in a broader sense, this paper has to formulate the need for using the balanced scorecard as a guiding principle to build a strategy map, draw up an action plan for measuring key drivers as well as determine of critical success factors aimed at open innovation driven company.

¹ Ph.D., Ass. Prof. Faculty of Economics – Prilep, University “St. Kliment Ohridski” - Bitola, Macedonia, e-mail: dejan.krstevski@eccfp.edu.mk

² Ph.D., Prof. Faculty of Economics – Prilep, University “St. Kliment Ohridski” - Bitola, Macedonia, e-mail: gmanceski@t-home.mk

Key words: Balanced Scorecard, Open Innovation, Strategic Management, Strategy Map

JEL classification: M10, O31

Introduction

With a move from industrial economy towards an economy that is now mainly considered by intangible assets, such as knowledge and innovative competence, companies have to manage increasing level of complexity and uncertainty. “Innovation is no longer sole of company’s research and development division. Companies that have mastered innovation – well known leaders such as Apple, BMW, Google, Netflix and Procter and Gamble, have gone beyond R&D to ensure that innovation is an integral part of their organizations and their extended – value chains. In doing so, these companies have not only achieved notoriety but also significant and valuable competitive advantage.”³ Innovation is critical to stretch a competitive advantage for SMEs, particularly in the era that is followed by a major increase in competition among SMEs and spectacular global market change.

Open innovation means pulling idea from myriad sources and understanding that each contributor brings a different perspective to the table. Most of the small companies are underfunded. Also, they need to be inventive with allocation of their limited resources. Furthermore, challenging the rising competition and fronting the growing R&D and innovation costs, small but also medium-sized enterprises can no longer live on their innovation efforts. They need to change their business model to embracing strategies of collaboration, rather than competition. Open innovation is a paradigm that assumes that companies can use external ideas as well as internal ideas to advance their technology⁴.

The successful implementation of the scorecard method should translate a company’s mission and vision into a comprehensive set of performance indicators⁵.

³ A.T. Kearney, Inc. 2008. “Innovation Management: Strategies for Success and Leadership.” <http://www.atkearney.com/documents/10192/23b911ad-0067-4c30-8fc0-c57ac7d1eef5>

⁴ Chesbrough, H. 2011. *Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era*. San Francisco: Jossey Bass.

⁵ Kaplan, R. S., and Norton, D. 1993. “Putting the Balanced Scorecard to Work.” *Harvard Business Review* 71, no. 5 (September–October): 134–147.

It is very important to point out the need for companies' strategy which is comprised by open innovation approaches. Our proposed innovation management tool is a balanced scorecard that integrates innovations (open) indicators with strategic goals and projects in organizations. Therefore, the balanced scorecard (BSC) can be studied not only as a simple and useful tool to track companies' performance but also as a strategic innovation management tool. In the knowledge – based innovation economy which is indicated by intellectual capital contrary to physical assets, the balanced scorecard has to incorporate growing trends of innovations and adjust itself towards an open innovation era.

Hence, in a broader sense, this paper has to formulate the need for using the balanced scorecard as a guiding principle to build a strategy map, draw up an action plan for measuring key drivers as well as determine of critical success factors aimed at open innovation driven company. The paper is structured as following: In section 1 we briefly introduced the open innovation concept, focusing on the innovation driven small and medium-sized enterprises (SMEs). Afterwards, we discuss the need for using the balanced scorecard as a guiding principle for implementation of open innovation strategies in small and medium-sized enterprises (SMEs). Section 3 identifies key success factors and key performance indicators in each of the dimensions as well as determine of critical success elements aimed at open innovation driven company. Section 4 discusses how to build a strategy map using the balanced scorecard model. Finally, we conclude and debate contributions of our study.

1. OPEN INNOVATION AND SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs)

Usually, big organizations trusted on their own R&D divisions and support an idea about closed innovation model, where all innovations are under company's influence. The open innovation paradigm is a novel innovation strategy by which companies go beyond their R&D's innovation projects. Innovation outline is about illustrating how to bring innovations that add value to companies and customers⁶. In contrast to the closed innovation model, combining inflows and outflows of knowledge, these organizations

⁶ O'Sullivan, D., and Dooley, L. 2009. "Applying innovation." *Thousand Oaks, CA: SAGE Publications*: 3-33.

are open to share ideas with many stakeholders (customers, vendors, other organizations, employees, institutes and universities). Open innovation is already being adopted by large-sized and small and medium-sized companies. From technological point of view, open innovation is also by this time adopted by high-tech as well as low-tech industries.⁷ For SMEs, open innovation can mean cooperation with other small and medium-sized companies, providing relationships to jointly develop new services or products. SMEs do have the capacity for radical innovations – not just large companies.⁸ The companies that have a tendency to use open innovations effectively, are those that are willing to combine both traditional model of innovation (i.e., internal) with open innovation forms, but do it with a combined set of new processes.

Makeover towards open innovation strategy needs essential changes of SMEs to transfer from closed to open innovation. Also this means that some of the innovations principles requires fundamental changes. Mainly, the principal “the smart people in the field work for us” should be transformed to new principal “we need to work with smart people inside and outside the company”. “We should control our innovations, so that our competitors don’t profit from our ideas” be supposed to be converted to “we should profit from others’ use of our innovations, and we should buy others innovations whenever it improve our business model”. The other principal that saying “if we create the best ideas in the industry, we will win” has to be changed with new one “if we make the best use of internal and external ideas we will win”. Lastly, “the company that gets an innovation to the market first will win” should be changed by new principal “building a better business model is better than getting to the market first”.

In order to successfully achieve open innovation in practice at SMEs, innovation approach has to be incorporated in the corporative strategy. It extends not only to creating a company where innovation can bloom, but also providing clear directions about the goals, scale of innovation that is required to deliver the strategic goals of the business.⁹ Therefore, management innovation system is needed as a framework that emphasizes the importance of open innovations. It helps translating innovation strategy into actions. We have argued in this article that the balanced scorecard provides a framework

⁷ Drechsler, W., and Natter, N. 2012. “Understanding a firm’s openness decisions in innovation.” *Journal of Business Research*, Vol. 65, No.3: 438-445.

⁸ Acs, Z., and Audretsch, D.B. 1987. “Innovation in Large and Small Firms.” *Economic Letters* 23: 109-112.

⁹ Nada, N., Turkyilmaz, A., and El-Badawy, A. 2011. “SMEs Innovation Management Framework”. *Fatih University*: 3-5.

and enough flexibility for managing the implementation of open innovation approach at small and medium-sized enterprises while also facilitating its main functions:

- translation of company strategy and strategy objectives into actionable goals;
- communicating strategy through the organization;
- setting targets and actions to achieve those targets;
- reviewing performance and feedback about the strategy implementation.

2. USING THE BALANCED SCORECARD FOR MANAGING OPEN INNOVATION IN SMEs

The balanced scorecard (BSC) is a strategy-focused approach to performance the management that includes measures resulted from the organization's vision and mission. It is also a powerful management tool for strategy execution and useful measurement tool to track companies' performance.¹⁰ BSCs include objectives, measures, targets and initiatives in grading of four perspectives such as financial, customer, internal business process and learning and growth. At the highest point of the framework is financial performance, which is determined by a customer value proposition. This is in close connection with the right set of business processes. At the base of the framework is learning and growth, which provide the capabilities and infrastructure for a continually evolving value proposition and processes.¹¹ The balanced scorecard lets managers to introduce four new processes that contribute to linking long-term objectives with short-term actions. All of them helps managers to build consensus about company's vision and mission, to communicate their strategy trough the organization, to integrate their business and financial plans and feedback and learning which gives companies the capacity about strategic learning.¹²

¹⁰ Kaplan, R. S., and Norton, D. 1996. *Translating Strategy into Action: The Balanced Scorecard*. Boston: Harvard Business School Press.

¹¹ Frigo, M. L. 2002. "Strategy and the Balanced Scorecard." *Strategic Finance*, Vol. 84 Issue 5 (November): 3-6.

¹² Kaplan, R. S., and Norton, D. 1996. "Using the Balances Scorecard as a Strategic Management System." *Harvard Business Review*, (January–February): 75-85.

Organizations of all sizes have benefited from the management tools and concepts that come with the balanced scorecard - a system for managers to communicate and monitor the progress of their business strategies. Balanced scorecards are also appropriate for SMSs. But for many small and medium-sized enterprises the concepts of the balanced scorecard get idealistic because they assume its design and implementation demand the budget, manpower and know-how of a large organization to be successful. Therefore, the small business should think about the balanced scorecard in a different way to the multinational, there is possibility that the balanced scorecard might be even more influential for the SMEs than it is for the large organizations. Moreover, SMEs should be able to implement BSC more quickly, as there are fewer people and less complex organizational processes. Many small and medium-sized companies have used individual approach to implementation of balanced scorecard in order to achieve more rational result.

In scholarly literature, many articles communicate the limitations of the balanced scorecard in the innovation economy. Mainly, they share opinion that the traditional BSC is neither appropriate nor useful to measure the innovations outcomes when implementing an open innovation model.¹³ Furthermore, the other limitations show up when companies need to collaborate with external partners to develop new solutions.¹⁴

Beside above mentioned remarks about the limitations of the balanced scorecard in the era of the innovation economy, this paper has to formulate the need for using the balanced scorecard in its traditional frames as a guiding principle to implement an open innovation initiatives at SMSs. In the following, some small adaption of the existing framework is needed for effective and successful usage of the BSC in implementation of open innovation strategy at SMSs. Therefore, we are proposing amendments to the balanced scorecard method to use it in open innovation projects. To better support the implementation of an open innovation strategy together with the overall business strategy in SMEs, we propose adaptations to the existing four perspectives in terms of their objectives, measures, targets and actions that would be more oriented towards open innovations. Also, it is suggested that creation of the new fifth perspective, "open innovation and collaboration" will more adroitly and explicitly communicate a company's intended open innovation strategy. Exhibit 1 depicts open innovation balanced scorecard

¹³ Chesbrough, H. 2006. *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston: Harvard Business School Press.

¹⁴ Voelpel, S. C., Leibold, M., and Eckhoff, R. A. 2006. "The Tyranny of the Balanced Scorecard in the Innovation Economy". *Journal of Intellectual Capital*, Vol. 7 No. 1: 43-60.

for SMEs. The description of a separate open innovation and collaboration perspective in Exhibit 1 suggest that a company develop goals and measures that directly communicate and highlight the firm's open innovation strategy. The specific goals and measures will naturally differ across companies as companies will have differing core competencies and abilities to compete. Nevertheless, some general issues for which goals and measures can be developed can be addressed as a starting point.

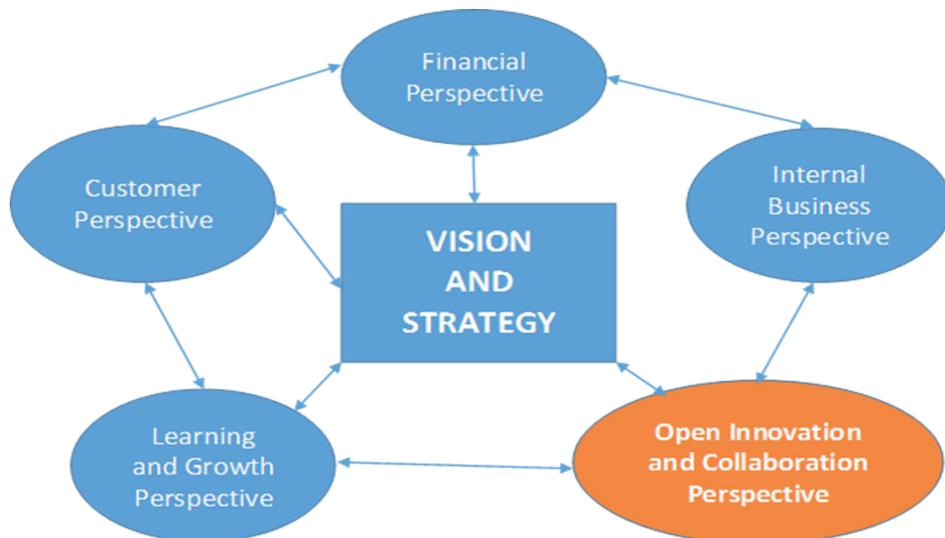


Exhibit 1. *Adjusted Classic Balanced Scorecard: Five Perspectives*

Exhibit 2 depicts some suggested goals and measures that can serve, at a very least, as that starting point. The fifth perspective, innovation and collaboration, emphasizes a joint idea generation among different partners such as companies, universities, customers, institutes and suppliers and new value creation by developing novel products and services, processes and intangible assets in a small and medium-sized companies. Depending on the specific open innovation strategy, managers need to adopt indicators and create new ones that reflect the company strategy. Furthermore, managers need to outline casual relationships between all five perspectives.

Also, this part describes in detail the necessary steps for the implementation of the balanced scorecard for open innovation in SMEs. At a beginning, the first step was to create a common understanding of the original concept of the balanced scorecard through literature.

Exhibit 2. Open Innovation and Collaboration Perspective - Goals and Measures

Issues Requiring Goals	Critical Success Factor
(1) Collaboration with different partners	<ul style="list-style-type: none"> - Collaboration with universities partners (per year) - Percentage of projects driven by customers, suppliers and other partners - Partner turnover rate
(2) Innovation capability of the company	<ul style="list-style-type: none"> - Lunch of new products and services based on external ideas (a) - Percentage of realized external ideas (b) - External patents usage rate (c)

Sources: (a) (c) Chesbrough (2006); (b) Kaplan and Norton (1996).

First, Robert Kaplan and David Norton introduced the technique in a 1992 *Harvard Business Review* article. Meanwhile, numerous papers and researches have been conducted to improve the original BSC to different companies. Mainly, a number of articles and books have discussed the advantages and its application in the profit sector¹⁵. Among the numerous successful users are: AT&T, Intel, Brown and Root, Deutsche Telekom and famous adopters in the service sector include the international accounting firms Ernst and Young and KPMG and many other companies in different fields of the industry. Since BSC is also appropriate for small and medium-sized companies, a sound understanding about the implementation of the balance scorecard in SMEs is required. The second step aimed at achieving a good understanding on the open innovation paradigm and performance impact of open innovation for SME's and to find out what the possible inputs for the BSC are based on this step. The small and medium-sized companies are pertinent source of innovation within the international system. They have the capacity for new innovation equal to the large-sized companies. However, they differ from those of big companies because they are more flexible, less formalized with limited financial resources.¹⁶ The third step aimed at gaining more inputs for the new BSC based on questionnaire and interview executed internally and externally. The fourth step was to find out what the possible

¹⁵ [8], [10], [11], [12], [13], [14], [15], [18], [19].

¹⁶ Freeman, J., and Engel, J. 2007. "Models of Innovations: Start-ups and Mature Corporations." *California Management Review*, Vol. 50 No. 1: 94-119.

inputs for the BSC are based on previous steps, define the key success factors and formulate a preliminary balanced scorecard containing operational measures for the strategic objectives. The final step described the final design of the balanced scorecard.

3. KEY PERFORMANCE INDICATORS - MEASURING AND MANAGING OPEN INNOVATION IN SMEs

KPI's provide a good foundation for informed discussion and decision making process. They are the pointers which need to be measure, to be identify how well internal and external process are performing, and to contribute in a way to predict what will happened in the future. For each balanced scorecard's perspectives is exposed in Exhibit 1 has objectives to accomplish and there are certain relationships among them. The strategic mapping and linking of the variables helped the small and medium-sized companies to spell out the objectives, the drivers and the relevant metrics for the objectives. Some of the most applicable key performance indicators (KPI's) as a part of the measures element suggested to track and asses the performance of open innovation initiatives carried out at SMEs is shown in Exhibit 3. ¹⁷

¹⁷ Magyar, A. 2008. "Measuring Impact of Research Projects on Company Performance." M.Sc. Thesis, Cranfield University.

Exhibit 3. Scorecard for Strategic Theme: Key Performance Indicators for Open Innovation in Small and Medium-Sized Companies

Perspective	Objective	Measure
Financial	Profit growth	- Percentage of cost savings based on new product / services launch - Annual budget invested in collaborative project - Turnover using patents
	Maintain revenue market share	- Gross profit of the new product developed based to the collaborative project - Volume of cost savings based on share services –“Low hanging fruits” - Percentage of revenue market share based on retention & loyalty programs
Customer	Add high value customer	- Number of loyalty programs introduced together with the partners - Profit per retain customer - Time – to – market
	Retain high value customers	- Introduced share services together with external partners - Customer satisfaction ratio (Trim index) conduct with external company - Acquisition cost per new customer
Internal process	Continue leadership in existing products	- Number of new products / services develop by the company per year
	Build leadership in new products / services	- New retention program developed together with the partners
	Creation of infrastructure to improve capabilities to absorb external ideas	- New technology introduced with partners together - Number of new services preferred by customers
Open innovation and collaboration	Collaboration with different partners	- Collaboration with Universities per year - Percentage of projects driven by customers, suppliers and other partners
	Innovation capability of the company	- Partner turnover rate - Percentage of realized external ideas - External patents usage rates

Perspective	Objective	Measure
Learning and growth	Train people to build skills and general competencies	- Training programs per employee - Number of the new highly skilled employees per year hired
	Acquisition of the talented staff Openness of the company	- Number of collaborative projects in the company per year
	Motivation of the partners	- Number of awards to the partners for their contribution to the mutual products/services/technology

Sources: I. M. Pandey, “Balanced scorecard: Myth and Reality”, 2005 – **adjusted scorecard towards open innovations in SMEs**

Balanced scorecard should not just be collections of financial and nonfinancial measures, structured in three to five perspectives. The best balanced scorecard reflect the strategy of the organizations. Strategy scorecards along with their graphical presentations on strategy maps provide a logical and comprehensive way to describe strategy.¹⁸ Hence, they have to communicate clearly the SMEs desired strategy towards open innovations and its hypothesis about how these outcomes related to the open innovations can be achieved.

4. STRATEGY MAP FOR INNOVATION DRIVEN COMPANY

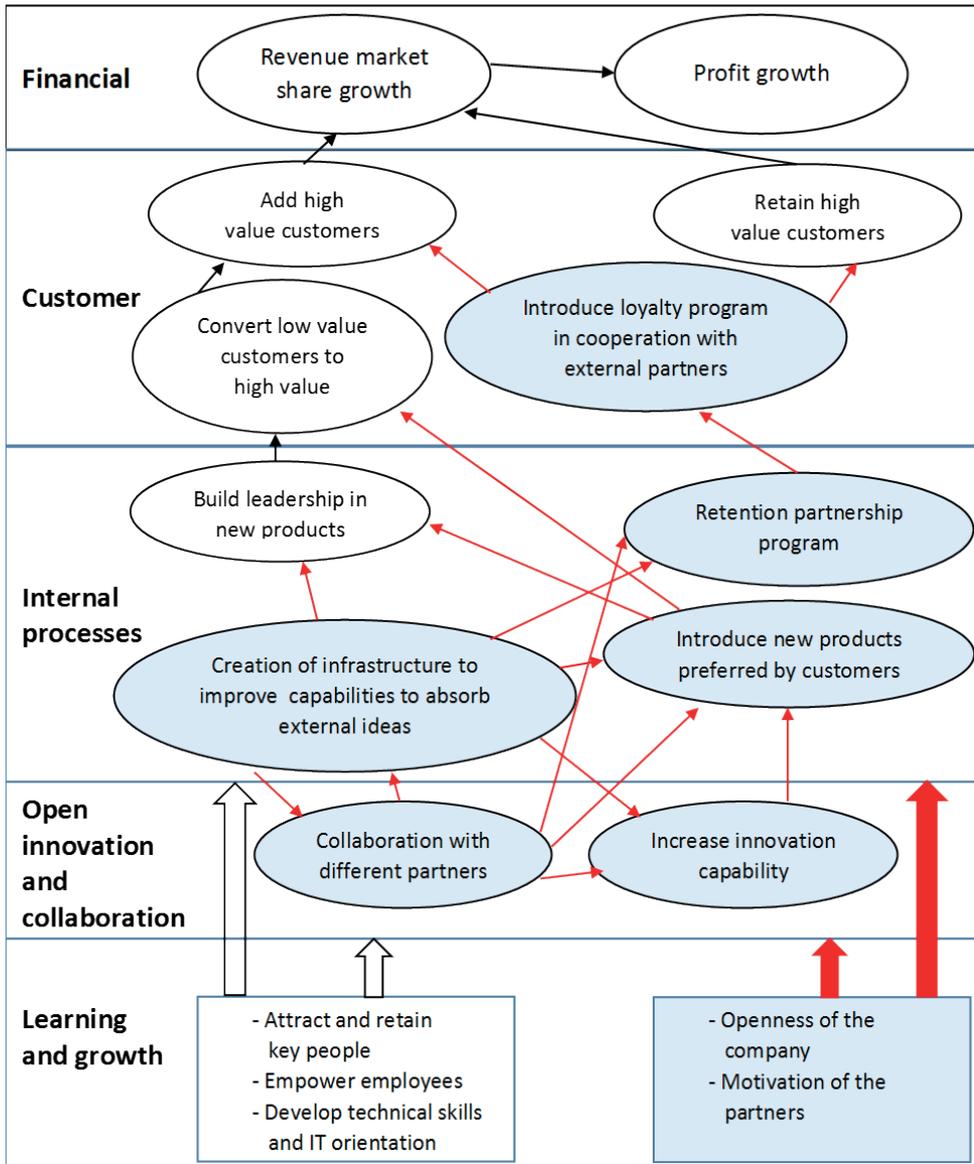
Traditionally the balanced scorecard are presented in two formats: either as a “scorecard” or alternatively as a “strategic map” as pointed on Exhibit 4. The strategic map concept has been introduced in order to help organizations in their efforts while they are linking different performance indicators¹⁹. The strategic map also shows the linkages and interaction between various variables. The strategic map additionally defines logical cause-and-effect linkages between dissimilar aspects in the organizations. It is believed that when strategy is shown systematically in a map, it increases the chances of its success²⁰. Exhibit 4 depicts some suggested adaptations to the existing four perspectives in terms of their objectives, measures and actions that would be more oriented towards open innovations. Also, it shows the new fifth perspective, “open innovation and collaboration” together with its linkages and cause and effect relationships.

¹⁸ Kaplan, R. S., and Norton, D. P. 2001. “Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I.” *American Accounting Association, Accounting Horizons*, Vol. 15 No. 1: 87-104.

¹⁹ Kaplan, R. S., and Norton, D. 1996. *Translating Strategy into Action: The Balanced Scorecard*. Boston: Harvard Business School Press.

²⁰ Kaplan, R. S., and Norton, D. P. 2001. “Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I.” *American Accounting Association, Accounting Horizons*, Vol. 15 No. 1: 87-104.

Exhibit 4. Strategic Map Linking for Strategic Theme: Strategic ap for Open Innovation in Small and Medium-Sized Companies



The chain of cause and effect should permeate all five perspectives of a balanced scorecard. For example, revenue market share growth may be an outcome measure in the financial perspective. The driver of this financial measure could be retain high value customers, the result of a high degree of loyalty among existing customers. Investigates of customer preferences may disclose that loyalty program is highly valued by customers. Thus, loyalty program is expected to lead to higher customer loyalty, which, in turn is expected to lead to higher financial performance. The process is going on by determining what internal processes the company must excel at to introduce loyalty program. To introduce loyalty program, the business may need to realize retention partnership program and creation of infrastructure to improve capabilities to absorb external ideas, both factors that could be scorecard measures in the internal perspective. And how do small and medium-sized company improve capabilities to absorb external ideas and realize retention partnership program? By collaboration with different partners and increase innovation capability an objectives from open innovation and collaboration perspective. In fact, many collaboration models have emerged to achieve more innovations outputs under collaborative environments, such as virtual organizations or living labs.²¹ Finally, openness of the company, motivation of the partners, attract and retain key people, empower employees are ultimate objectives and measures that would be a candidates for the learning and growth perspective. All above mention explain how an entire chain of cause-and-effect relationships can be established as a vertical vector through the five perspective of the balanced scorecard.

Conclusion

Meeting the many challenges for improvement will require SMEs to undergo fundamental changes and to continuously seek new ways to create future value. Our literature review specifies that transformation towards open innovation requires essential modifications of SMEs to move from close to open innovation. Our paper highlights that managing open innovation in SMEs implies the usage of a strategic managerial system in order to support open innovation strategy. In scholarly literature, many articles communicate

²¹ Flores, M., Al-Ashaab, A., and Magyar, A. 2009. "A Balanced Scorecard for Open Innovation: Measuring the Impact of Industry-University Collaboration." *In Leveraging Knowledge for Innovation in Collaborative Networks*, Springer Berlin Heidelberg: 23-32.

the limitations of the balanced scorecard in the innovation economy. Mainly, they share opinion that the traditional BSC is neither appropriate nor useful to measure the innovations outcomes when implementing an open innovation model. In this paper we offered balanced scorecard in its traditional and original frames as a guiding principle to implement an open innovation initiatives at SMSs. To better support the implementation of an open innovation strategy together with the overall business strategy in SME's, we propose adaptations to the existing four perspectives in terms of their objectives, measures, targets and actions that would be more oriented towards open innovations. Also, it is suggested that creation of the new fifth perspective, "open innovation and collaboration" will more adroitly and explicitly communicate a company's intended open innovation strategy. The BSC implementation will support the SMEs effort to discover and maximize the benefits and impacts that innovation and knowledge management deliver on the organization competitive edge and their open innovation business model.

References

1. Acs, Z., and Audretsch, D.B. 1987. "Innovation in Large and Small Firms." *Economic Letters* 23: 109-112.
2. A.T. Kearney, Inc. 2008. "Innovation Management: Strategies for Success and Leadership."
<http://www.atkearney.com/documents/10192/23b911ad-0067-4c30-8fc0-c57ac7d1eef5>.
3. Chesbrough, H. 2006. *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston: Harvard Business School Press.
4. Chesbrough, H. 2011. *Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era*. San Francisco: Jossey Bass
5. Drechsler, W., and Natter, N. 2012. "Understanding a firm's openness decisions in innovation." *Journal of Business Research*, Vol. 65, No.3: 438-445.
6. Flores, M., Al-Ashaab, A., and Magyar, A. 2009. "A Balanced Scorecard for Open Innovation: Measuring the Impact of Industry-

- University Collaboration.” *In Leveraging Knowledge for Innovation in Collaborative Networks*, Springer Berlin Heidelberg: 23-32.
7. Freeman, J., and Engel, J. 2007. “Models of Innovations: Start-ups and Mature Corporations.” *California Management Review*, Vol. 50 No. 1: 94-119.
 8. Frigo, M. L. 2002. “Strategy and the Balanced Scorecard.” *Strategic Finance*, Vol. 84 Issue 5 (November): 3-6.
 9. Hoffecker, J., and Goldenberg, C. 1994. “Using the Balanced Scorecard to Develop Company-Wide Performance Measures.” *Cost Management*, Fall: 5-17.
 10. Kaplan, R. S., and Norton, D. P. 1992. “The Balanced Scorecard - Measures that Drive Performance.” *Harvard Business Review* (January): 71-79.
 11. Kaplan, R. S., and Norton, D. 1993. “Putting the Balanced Scorecard to Work.” *Harvard Business Review* 71, no. 5 (September–October): 134–147.
 12. Kaplan, R. S., and Norton, D. 1996. *Translating Strategy into Action: The Balanced Scorecard*. Boston: Harvard Business School Press.
 13. Kaplan, R. S., and Norton, D. P. 2001. “Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I.” *American Accounting Association, Accounting Horizons*, Vol. 15 No. 1: 87-104.
 14. Kaplan, R. S., and Norton, D. 1996. “Using the Balances Scorecard as a Strategic Management System.” *Harvard Business Review*, (January–February): 75-85.
 15. Kurtzman, J. 1997. “Is Your Company Off Course? Now You Can Find Out Why.” *Fortune*, (February): 128-130.
 16. Magyar, A. 2008. “Measuring Impact of Research Projects on Company Performance.” M.Sc. Thesis, Cranfield University.
 17. Nada, N., Turkyilmaz, A., and El-Badawy, A. 2011. “SMEs Innovation Management Framework”. *Fatih University*: 3-5.
 18. Newing, R. 1994. “Benefits of a Balanced Scorecard.” *Accountancy* 114 (1215): 52- 53.
 19. Newing, R. 1995. “Wake up to the Balanced Scorecard.” *Management Accounting*, London (MAC) 73 (3): 22-23.

20. O'Sullivan, D., and Dooley, L. 2009. "Applying innovation." *Thousand Oaks, CA: SAGE Publications: 3-33.*
21. Pandey, I.M. 2005. "Balanced scorecard: Myth and Reality." *Vikalpa*, 30(1): 51-66
22. Voelpel, S. C., Leibold, M., and Eckhoff, R. A. 2006. "The Tyranny of the Balanced Scorecard in the Innovation Economy". *Journal of Intellectual Capital*, Vol. 7
No. 1: 43-60.