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# **Towards Balancing Innovation and Imitation Practices in the Value Creation Process**

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## **TOWARDS BALANCING INNOVATION AND IMITATION PRACTICES IN THE VALUE CREATION PROCESS**

### ***Summary***

*Numerous studies challenge the ultimately advantageous position of innovators and indicate that imitation, in the whole spectrum of its diverse forms, generates a considerable potential for enhancing the competitiveness of the followers and shaping the path for effective surpassing the innovators. The emerging literature suggest strategic integration of innovative and imitative practices in order to achieve above average profits. Therefore, in this article imitation is considered on par with innovation as an alternative strategic option for successful business performance. The article presents the fundamental conditions affecting the managerial decision on the model of value creation for particular project or its modules.*

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### **1. Introduction**

The innovation has been investigated thoroughly from a variety of perspectives and according to majority of authors developing and introducing innovations to the market opens up feasible opportunities for generating major benefits that enhance competitive advantage of innovators. Those benefits support commonly formulated recommendations for heavy investments in R&D, speeding time-to-market with new products, focusing on achieving the first-mover position. However, the business practice and emerging literature on innovation management, open innovation model, imitation strategies for market entry, put in question this widely proclaimed ultimately attractive picture of the market pioneers. Numerous studies indicate that imitation, in the whole spectrum of its diverse forms, generates a considerable potential for enhancing the competitiveness of the followers and shaping the path for effective surpassing the innovators. Therefore, in this article imitation is considered on par with innovation as an alternative strategic option for successful business performance. The aim of the article is to present the fundamental conditions affecting the managerial decision on the model of value creation for particular project or its modules.

### **2. Innovation – appreciated and rewarding strategy**

Scientific exploration of innovation dates back to early 40's of the past century<sup>1</sup>. By introducing innovation to economic sciences J.A. Schumpeter provided a very broad

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<sup>1</sup> B. Fiedor, *Teoria innowacji*, PWN, Warszawa 1979, pp. 18-21;

definition of the term encompassing technical, marketing and organizational aspects of the subject: a new product or a new quality of a product, a new method of production, a new market, a new source of supply of raw materials or half-manufactured goods, and lastly implementing the new organization of any industry<sup>2</sup>. Nevertheless, according to Schumpeterian approach the term innovator was ascribed only to pioneers while diffusion of innovations was regarded as imitation. This was closely linked with the tendency to focus on radical changes and neglecting the significance of incremental improvements<sup>3</sup>.

The innovation has been investigated thoroughly from a variety of perspectives, thus the rich literature presents a good understanding of the immense and composite impact of innovations on the socio-economic development:

- By introducing novelty into economic sphere and opening up new business opportunities innovation, followed by the process of its diffusion, acts as the engine of growth for economies<sup>4</sup>;
- Through its tendency to cluster in certain context, innovation induces a more rapid development of particular industries, thus implies significant changes in the structure of the economy<sup>5</sup>;
- Innovation serves as a powerful factor in explaining differences in performance between firms, as well as divergence in cross-country economic growth, hence it plays a critical role in changing patterns of competitiveness at the national, regional and firm levels<sup>6</sup>;
- The content of specific innovations and the speed of their adoption imply significant and far-reaching changes in quality and quantity of employment supporting the assumption of disequilibrating nature of the economic changes<sup>7</sup>.

Following the path of searching for a relation between innovation and economic performance, innovation research reached the microeconomic level. According to majority of

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<sup>2</sup> J.A. Schumpeter, *Teoria rozwoju gospodarczego*, PWN, Warszawa 1960, p. 104;

<sup>3</sup> J. Hagedoorn, *Innovation and Entrepreneurship: Schumpeter Revisited*, Industrial and Corporate Change, Vol. 5, No. 3, 1996, pp. 883-896;

<sup>4</sup> B. Verspagen, *Innovation and Economic Growth*, /in:/ *The Oxford Handbook of Innovation*, (eds.) J. Fagerberg, D.C. Mowery, R.R. Nelson, Oxford University Press, Oxford 2011, pp. 487-513;

<sup>5</sup> J. Fagerberg, M.M. Godinho, *Innovation and Catching-up*, /in:/ *The Oxford Handbook of Innovation*, (eds.) J. Fagerberg, D.C. Mowery, R.R. Nelson, Oxford University Press, Oxford 2011, pp. 514-542;

<sup>6</sup> G.L.A. Yong, K.W. Ho, *Innovation, Imitation, and Entrepreneurship*, The Singapore Economic Review, Vol. 51, No. 2, 2006; J. Cantwell, *Innovation and Competitiveness*, /in:/ *The Oxford Handbook of Innovation*, (eds.) J. Fagerberg, D.C. Mowery, R.R. Nelson, Oxford University Press, Oxford 2011, pp. 543-567;

<sup>7</sup> M. Pianta, *Innovation and employment*, /in:/ *The Oxford Handbook of Innovation*, (eds.) J. Fagerberg, D.C. Mowery, R.R. Nelson, Oxford University Press, Oxford 2011, pp. 568-598;

authors developing and introducing innovations to the market opens up feasible opportunities for generating major benefits that enhance competitive advantage of innovators<sup>8</sup>:

- Image derived from early entry;
- Creating brand loyalty;
- Building a large market share – economy of the scale;
- Technological leadership, experience effects;
- Set product standards;
- Access to distribution;
- Preempting rivals in the acquisition of scarce resources;
- Legal protection of innovation.

Those benefits support commonly formulated recommendations for heavy investments in R&D, speeding time-to-market with new products, focusing on achieving the first-mover position. Nevertheless the business practice and emerging literature on innovation management, open innovation model, imitation strategies for market entry, put in question this proclaimed ultimately attractive picture of the market pioneers<sup>9</sup>.

Despite the recognition of the multifaceted character of innovation the majority of research works were for a long time focused almost exclusively on technological innovations. The growing importance of service sectors, knowledge and information in the economy induced shift towards non-technological innovations and development of new approaches to innovations and innovation management. The research results and the business practice confirmed that, although the narrow view of innovation as a homogenous unit recognizable at the precise point in time of its market entry provides useful indicators to study innovation (e.g. R&D expenditures, patent activity), yet it does not reflect the compound nature of the issue. According to contemporary perspectives innovation is viewed as a lengthy process and “systemic phenomenon [that] results from continuing interaction between different actors and organizations”<sup>10</sup>. Innovation as a continuous process involves developing new combinations of existing proprietary and external knowledge and resources, implementing subsequent incremental improvements resulting from learning-by-doing, incorporating complementary

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<sup>8</sup> S.P. Schnaars, *Managing imitation strategies*, The Free Press, New York 1994; D.J. Teece, *Managing intellectual capital*, Oxford University Press, New York 2002; K.Z. Zhou, *Innovation, imitation, and new product performance: The case of China*, “Industrial Marketing Management”, vol. 35, 2006, p. 395;

<sup>9</sup> R.A. Kerin, R.R. Varadarajan, R.A. Peterson, *First-mover advantage: A synthesis, conceptual framework and research propositions*, “Journal of Marketing”, Vol. 56, No. 4; O. Shenkar, *Copycats*, Harvard Business Press, Boston 2010; S.P. Schnaars, *Managing...*, op.cit.;

<sup>10</sup> *The Oxford Handbook of Innovation*, J. Fagerberg, D.C. Mowery, R.R. Nelson (eds.), Oxford University Press, Oxford 2011, p. 4;

inventions and innovations developed by other entities<sup>11</sup>. Therefore, acknowledging the systemic nature of innovation provided more suitable ground for understanding the complex process of innovation making, developing the open innovation model, yet blurred the former clear distinction between invention, innovation and imitation.

### 3. Approaching imitation in a strategic manner

The imitation as a business strategy for market entry and competitive advantage developing has received a considerably less attention from researchers than the first-movers strategy<sup>12</sup>. Predominant Schumpeterian view induces a biased perception of innovation process – exploring and evaluating practices and outcomes only from the original innovator perspective. Consequently, imitations that form the diffusion cloud, are most often considered in terms of unwelcomed, harmful but inevitable business practices. The limited attention devoted to imitation is primarily focused on illegal copying of original products. This adds up to a widespread bad impression of imitation as a criminal activity and leaves out of sight a whole spectrum of different types of imitative practices. However, the content of those imitative practices indicates the existence of potential for direct knowledge production that sometimes blurs the boundaries between imitations and original innovations<sup>13</sup>. Moreover, according to approach presented in Oslo Manual the concept of innovation is not limited to the first practical use of the new solution but also applies to products, processes, methods assimilated from other entities and adapted to a new context<sup>14</sup>. In other words assimilation and adaption commonly regarded as activities that do not bring pride and glory have been included in the noble category of innovation. This approach provided a sound framework for exploring innovation processes in those dynamically growing service sectors, in which innovations are not R&D but supply driven – e.g. tourism industry<sup>15</sup>.

Considering the ambiguity of the imitation sphere there is a need for a comprehensive typology of the diverse imitative practices. The literature presents rather modest collection of

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<sup>11</sup> *Ibidem*,

<sup>12</sup> Schmitz J.A., *Imitation, Entrepreneurship, and Long-Run Growth*, “Journal of Political Economy”, Vol. 97, No.3, 1989;

<sup>13</sup> *Ibidem*; O. Shenkar, *Copycats...*, op.cit.;

<sup>14</sup> *Podręcznik Oslo. Zasady gromadzenia i interpretacji danych dotyczących innowacji*, Wyd. OECD, EUROSTAT, Paryż 2005, p. 53;

<sup>15</sup> M. Najda-Janoszka, *Współdziałanie przedsiębiorstw turystycznych w ramach działalności innowacyjnej*, “Przegląd Organizacji”, No 12, 2012, pp. 20-23; S. Kopera, *The potential of social media in innovation processes of small and medium tourist enterprises*, “Journal of Management and Finance”, University of Gdansk 2013 (in Press);

imitation frameworks. The most common approach is to distinguish two main types of imitation<sup>16</sup>:

- Pure imitation – delivering duplicated solutions often without proprietary core technology, know-how, brands, reputation, in many cases by reverse engineering,
- Creative imitation – introducing improved offering of incumbent firms or modifying and adding new features to own products based on solutions developed by competitors<sup>17</sup>.

According to S.P. Schnaars (1994) imitation is too diverse to be captured in just two categories of rather vague boundaries. Based on the thorough studies he concluded that imitation is exercised in different forms that can be arranged along the creativity continuum with counterfeits on one extreme and original innovations involving the highest degree of creativity and experimentation at the other (Figure 1):

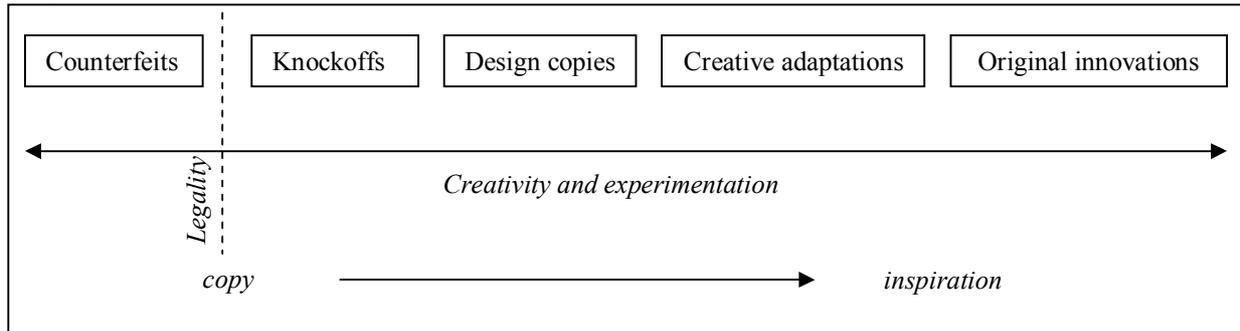
- Counterfeits – illegal duplicates carrying the same brand name or trademark as the original product;
- Knockoffs – close legal copies of original products carrying their own brand names developed due to absence or expiration of legal protection (patents, copyrights) of competitors' products;
- Design copies – copies of style, design of competitor's product carrying its own brand name and possessing its own unique engineering specifications, may be based on a unique and innovative technology;
- Creative adaptations – creative improvements of competitor's products, adaptations of existing ideas to new applications as well as truly innovative solutions merely inspired by competitor's offering.

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<sup>16</sup> Y. Luo, J. Sun, S.L. Wang, *Emerging Economy Copycats: Capability, Environment, and Strategy*, Academy of Management Perspectives, Vol. 25, No. 2, 2011, pp. 37-40; R.P. Lee, K.Z. Zhou, *Is Product Imitation Good for Firm Performance? An Examination of Product Imitation Types and Contingency Factors*, Journal of International Marketing, Vol. 20, No. 3, 2012, pp. 2-4;

<sup>17</sup> It has to be underlined that according to proposed typology creative imitation is based on improvements yet it does not involve invention. R.P. Lee, K.Z. Zhou, *Is Product.....*, op.cit., p. 4;

Figure 1 Imitation forms



Source: M. Najda-Janoszka, *Matching Imitative Activity of High-Tech Firms with Entrepreneurial Orientation*, *Journal of Entrepreneurship, Management and Innovation*, Vol. 8, No. 1, 2012, p. 57

It is important to note that creative adaptations included in the presented continuum of imitative activity are distinguished from incremental innovations, since the latter improve on a firm's own original product, whereas creative adaptations add value to products introduced by other units<sup>18</sup>. However, assuming that "every new innovation consists of a new combination of existing ideas, capabilities, skills, resources"<sup>19</sup>, there has not been defined at which point the creative adaptation ends and starts the novel innovation. Further, there is another important issue concerning the widely used, but in many cases misleading, practice to assume equality of innovators and market pioneers. The business practice provides a substantial bulk of examples that undermine this assumption<sup>20</sup>. Imitators can be found among late entrants as well as pioneers when they manage to enter the market with copied solution before the original innovation passes the commercialization phase. Hence, being innovator does not exclude the possibility of late entry to the market. Parallel but independent development of a highly similar solution is not a rare case in business practice. Consequently, the distinction between imitators and late-entry innovators is not always clear. Equally difficult is to define a pioneer in actual case stories observed in high-technology industries where for one innovative category there is a bundle of potential pioneers in the pursuit of market success. Therefore, the proper distinction of market entry strategies should include both criteria: the originality of the value created and the sequence in time of market entry<sup>21</sup>.

<sup>18</sup> Y. Luo, J. Sun, S.L. Wang, *Emerging...*, op.cit., p. 37-38;

<sup>19</sup> *The Oxford Handbook of Innovation*, (eds.) J. Fagerberg, D.C. Mowery, R.R. Nelson, Oxford University Press, Oxford 2011, p. 10;

<sup>20</sup> S.P. Schnaars, *Managing...*, op.cit., p. 12-13;

<sup>21</sup> *Ibidem*;

Although not commonly appreciated, imitation is widely recognized as an integral part of the competitive process<sup>22</sup>. In most theoretical frameworks the innovation plays the key role in the growth process, while the impact of imitators is underestimated and to large extend limited to harmful implications. Yet, emerging literature on imitation challenges the theories of growth driven by the costly development and costless diffusion of directly created knowledge<sup>23</sup>. Recent works point at fact, that imitation, in whole spectrum of its diverse forms, is a much more prevalent strategy leading to business growth, e.g. in tourism industry<sup>24</sup>. The diffusion of innovations, through creative adaptations induces further knowledge creation in learning-by-doing fashion<sup>25</sup>. It implicates not only reduction of innovator's profits but also generating broader benefits in terms of economic welfare due to lower prices and better availability of improved new solutions<sup>26</sup>.

Undoubtedly achieving market success is the main goal of the market entry and what is important profiting from the new value is neither restricted nor guaranteed to innovators and pioneers. In fact the emerging literature on imitation and open innovation models suggests that an advantageous position of pioneers, commonly proclaimed on the theoretical ground, is to large extend overstated<sup>27</sup>. Authors indicate that imitation generates a considerable potential for enhancing the competitiveness of the followers and shaping the path for effective surpassing the innovators<sup>28</sup>:

- Image created through fast adapting to market development
- Lowering the price and improving the quality through product upgrading,
- Lower costs of educating customers
- Technological leapfrogging
- Avoiding lock-in with irreversible investments before development of the dominant design
- Lower R&D expenditures through use of knowledge leakages, inventing around, reverse engineering
- Shifting capital from R&D to marketing

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<sup>22</sup> M.B. Lieberman, S. Asaba, *Why do firms imitate each other?* "Academy of Management Review", Vol. 31, No. 2, 2006;

<sup>23</sup> J.A. Schmitz, *Imitation...*, op.cit.; O. Shenkar, *Copycats...*, op.cit.;

<sup>24</sup> S.B. Droege, L.C. Dong, *Strategic entrepreneurship: imitation versus substitution*, "Journal of Small Business Strategy", Vol. 19, No.1, 2008;

<sup>25</sup> J.A. Schmitz, *Imitation...*, op.cit., p. 722-724;

<sup>26</sup> M.B. Lieberman, S. Asaba, *Why do...*, op.cit., p. 367; O. Shenkar, *Copycats...*, op.cit.; S.P. Schnaars, *Managing...*, op.cit.,

<sup>27</sup> D.J. Teece, *Managing...*, op.cit.; O. Shenkar, *Copycats...*, op.cit., K.Z. Zhou, *Innovation...*, op.cit.;

<sup>28</sup> *Ibidem*;

However, the archival data, case studies, historical analyses confirm that entry timing and the level of creativity involved in the adaptation process significantly affect a follower's market success. Thus, the effective transformation of the aforementioned potential into a dynamic growth characterizes rather creative and fast followers than late entrants engaged in duplicative imitation<sup>29</sup>.

#### **4. Performance enhancing – innovate and/or imitate?<sup>30</sup>**

In order to make an effective transformation of resources into a new value demanded and appreciated by customers a firm must apply a specific focus in its engagement in generic activities such as strategizing, financing and organizing<sup>31</sup>. The business practice indicates that innovation and imitation are utilized as alternative pathways to successful business performance, yet there are not many publications in which imitation is considered on par with other strategic options for market entry<sup>32</sup>. Facing potential alternatives, the choice of the particular market entry strategy should be considered in terms of managerial decision which involves in-depth analysis of potential benefits and drawbacks of each available option in given internal and environmental circumstances. Nevertheless, taking into account a dynamically changing environment, continuously increasing pace of technology advancing, growing complexity and development costs of created market offers (from physical products to experiences), it tends to be an unreachable luxury to afford implementing one type of strategy for the whole value creation process, since even industry leaders cannot constantly innovate every part of their business<sup>33</sup>. Therefore, firms should develop and leverage their competence and resource base to implement and effectively exploit both innovation and imitation strategies, depending on the specificity of the project and environmental circumstances. Moreover, taking into account the growing modularization trend in value creation processes<sup>34</sup> the trade-off decision on innovating or creatively adapting may concern not the whole project but particular modules of developed complex new solution. Balancing innovation and imitation is not a rare practice among industry leaders, even those commonly

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<sup>29</sup> K.Z. Zhou, *Innovation...*, op.cit., p. 395;

<sup>30</sup> Illegal forms of imitation such as counterfeits are not part of the discussion presented in the following part of the article.

<sup>31</sup> Lazonick, ..., Fagerberg, p. 29;

<sup>32</sup> D.J. Teece, *Managing...*, op.cit.; O. Shenkar, *Copycats...*, op.cit., K.Z. Zhou, *Innovation...*, op.cit.; Y. Luo, J. Sun, S.L. Wang, *Emerging...*, op.cit.; M.B. Lieberman, D.B. Montgomery, *First-mover (dis)advantages: retrospective and link with the resource-based view*, "Strategic Management Journal", Vol. 19, 1998, p. 1112;

<sup>33</sup> O. Shenkar, *Copycats...*, op.cit., p. 182;

<sup>34</sup> M. Najda-Janoszka, *Organizacja wirtualna. Teoria i praktyka*, Difin, Warszawa 2010;

recognized as highly innovative (e.g. IBM, Apple)<sup>35</sup>. However, this fusion in many cases results from random, ad hoc decisions, thus it is not exploited at its full potential as in case of deliberated strategic orientation<sup>36</sup>.

Benefiting from the potential of both strategic pathways requires firstly departing from perceiving imitation as a passive activity, straightforward shortcut to above average profits<sup>37</sup>. Assuming that the aim of an imitator is to generate not the best copy but the highest profit, achieving such objective involves skills and capabilities quite similar to those needed for an effective innovator. Both activities require dynamic capabilities that reflect firm's ability to assess, decipher, integrate, and reconfigure internal and external information, competencies and resources to match rapidly changing environments<sup>38</sup>. With those dynamic capabilities creative imitators merge "imitated elements with ingenuity and cognizance of context and circumstance"<sup>39</sup> indicating that "imitation is not a mindless repetition, it's an intelligent search for cause and effect"<sup>40</sup>. Hence, internal conditions supporting effective implementation either of alternatives are formed by skills and capabilities but on the basis of an open-minded culture encouraging and appreciating both "invented here" and "found with proud" attitudes.

Another group of factors directly affecting the decision on the model of value creation for particular project concern the specificity of the generated new value, namely the degree of inherent imitability of the new value and the level of novelty of that value, ranging from incremental improvement to a breakthrough level. The extent to which a new value is susceptible to imitation depends on the replicability of the productive knowledge embodied in that value<sup>41</sup>. From the innovator's perspective knowledge replication is necessary and beneficial by enabling geographical and product line expansion, as well as indicating firm's potential for learning and development, since effective replication requires deep process understanding followed by knowledge codification<sup>42</sup>. As pointed by D.J. Teece: "when knowledge is highly tacit it indicates that the phenomenon is not well understood"<sup>43</sup>.

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<sup>35</sup> O. Shenkar, *Copycats...*, op.cit.; S.P. Schnaars, *Managing...*, op.cit.,

<sup>36</sup> In high-tech sectors developing complex electronic or software products involves a very broad sourcing from existing industry knowledge, to the extent that original innovations can and often do result from imitative activity. However, that imitation often is a consequence of inadvertent and unconscious infringements of patents covering certain line of codes. Hence, significant number of high-tech firms fall prey to patent-sharks. J. Henkel, C.Y. Baldwin, *Modularity for Value Appropriation – Drawing the Boundaries of Intellectual Property*, Harvard Business School Working Paper 09-097, 2009, p. 29-30;

<sup>37</sup> J.A. Schmitz, *Imitation...*, op.cit., pp. 723-724;

<sup>38</sup> D.J. Teece, *Managing...*, op.cit.;

<sup>39</sup> O. Shenkar, *Copycats...*, op.cit., p. 17;

<sup>40</sup> *Ibidem*, p. 28;

<sup>41</sup> D.J. Teece, *Managing...*, op.cit., p. 18;

<sup>42</sup> *Ibidem*;

<sup>43</sup> *Ibidem*;

However, the easier and faster is the self-replication, the greater is the risk of imitation, defined as replication performed by a competitor. Currently observed advancement in information processing provides better perspectives for knowledge codification and further accelerates its transfer and diffusion. The studies indicate that product and marketing innovations are more easily copied since their knowledge content is readily observable to competitors. In high-tech sectors it is a common practice to utilize reverse engineering to learn the new solutions. However, process innovations are more immune to such practices since being not as much visible they do not reveal how their unique characteristics have been obtained<sup>44</sup>. According to the seminal work of Mansfield information about new R&D projects tends to leak out to competitors within 12-18 months. Assuming that it takes on average three years to translate an idea into an innovative product ready for market introduction, then “there is a better-than-even chance that the decision [to innovate] will leak out before innovation is half-completed”<sup>45</sup>. The dilemma concerning knowledge codification becomes even more challenging when it comes to an open innovation model (OIM), that assumes an intensive and extensive cooperation for innovation among a broad spectrum of internal and external entities, which may use acquired knowledge for imitation of products and services not related to the cooperation. The literature on OIM confirms the correlation between imitation and widely scoped open innovation setting<sup>46</sup>. The results indicate that the breadth and scope of cooperation within OIM (number of partners and number of innovation phases) although enable a bulk of different and complementary innovations, yet significantly induce risk of imitation<sup>47</sup>. Hence, OIM stimulate fast technology development inter alia by speeding up the innovation diffusion process and providing a rich pool of opportunities for planned and inadvertent knowledge sharing<sup>48</sup>. Therefore, firms engaging in OIM need to develop a new, dedicated system of knowledge management in order to capture the optimal level of value generated from innovation process carried out with manifold partners. Henkel and Baldwin proposed a knowledge modularization model that complements the modular manufacturing system encompassing products, processes, and task teams<sup>49</sup>. According to their model a modular system of knowledge involves decomposing the productive knowledge into components that are subjects to different treatment in terms of intellectual property rights

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<sup>44</sup> *Ibidem*;

<sup>45</sup> E. Mansfield, *How rapidly does new industrial technology leak out? The Journal of Industrial Economics*, Vol. 34, No.2, 1985, p. 219;

<sup>46</sup> T. Veer, A. Lorenz, K. Blind, *How open is too open? The ‘dark side’ of openness along the innovation*, 35 DRUID celebration Conference 2013, Barcelona, Spain 2013;

<sup>47</sup> *Ibidem*;

<sup>48</sup> *Ibidem*;

protection<sup>50</sup>. Modular system of knowledge allows for more efficient control of the core know-how and simultaneously provides opportunities for dynamic knowledge development through its diffusion among entities participating in the innovation process<sup>51</sup>. Nevertheless, it has to be underlined that “from a pure value creation standpoint, there will at any time be an optimal modular structure. However, the optimal modular structure for capturing value is not necessarily the same as the optimal structure for creating value”<sup>52</sup>. Modularization lowers the threshold for entering technology and capital intensive markets since the knowledge and resource base formerly maintained within the boundaries of the firm is being more and more dispersed through intensive usage of modularization and outsourcing strategies<sup>53</sup>. Technological expertise is therefore in the hands of module suppliers.

The new value introduced to the market can reflect different degree of novelty, ranging from incremental improvement to a breakthrough level, and thus implicates different rationale for selecting the innovator or imitator strategy at each of those levels. In sectors that are characterized by a short life cycle of products and technology the diffusion of innovation by means of imitative practices is quite fast and contributes to the equally rapid erosion of competitive advantages of innovators<sup>54</sup>. Thus, in those sectors it is the time-advantage that substantially determines the amounts of profits generated from the created new value. In order to capture the value and outpace the imitators innovators are forced to speed up the time-to-market of incremental innovations in such a manner, that by the time imitator manage to fully adapt the introduced innovation, the innovator should be ready to launch the next improvement<sup>55</sup>. This strategic direction requires expertise and efficiency in intensive exploitation of the learning curve. On the other hand introducing a radical innovation, that renders existing industry standards obsolete, initiates the battle for setting the new industry standard. An opportunity to set or have a significant contribution to a new industry standard attracts imitators since “the best initial design concepts often turn out to be hopelessly wrong” (e.g. ballpoint pens, videogames)<sup>56</sup>. The pioneering products based on the first-generation of the new technology, are most of the time ill-formed and defective, requiring further

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<sup>49</sup> Henkel J., Baldwin C.Y., *Modularity for...*, op.cit.;

<sup>50</sup> *Ibidem*;

<sup>51</sup> M. Najda-Janoszka, *Zatrzymywanie wartości w sieciach kooperacyjnych przedsiębiorstw*, „Zeszyty Naukowe Uniwersytetu Ekonomicznego w Poznaniu”, nr 169, Poznań 2011, s. 48 – 62

<sup>52</sup> Henkel J., Baldwin C.Y., *Modularity for...*, op.cit., p. 17;

<sup>53</sup> O. Shenkar, *Copycats...*, op.cit., p. 48.

<sup>54</sup> S. Nordin, *Tourism Clustering & Innovation – Paths to Economic Growth & Development*, European Tourism Research Institute Mid-Sweden University, Östersund 2003, p. 31;

<sup>55</sup> K. Jennewein, *Intellectual Property Management*, Physica-Verlag, Heidelberg 2005, pp. 180-181;

<sup>56</sup> D.J. Teece, *Managing...*, op.cit., p. 98;

development to move them further away from the lab and closer to the market<sup>57</sup>. Due to technological and market uncertainty pioneers often miss the best opportunities and preempt resources, “which prove to be of limited value as the market evolves”<sup>58</sup>. Bearing in mind that innovation is a continuous process and new solutions do not appear out of nowhere without precedent, even a breakthrough innovation should be perceived as a particular stage in that process. Hence, it is not as much surprising that variety of followers are quite quickly prepared for further development of such a breakthrough innovation. In their search for dominant design imitators modify the innovative product relying on the breakthrough solutions pioneered by the innovator and what is equally important they carefully manage linkages to complementary, functionally interrelated technologies. With complex technologies ensuring access to complementary resources is very often more important than the innovation itself<sup>59</sup>. According to Teece “when imitation is possible and occurs in conjunction with design modification before the emergence of a dominant design, followers have a good chance of having their modified product anointed as the industry standard, often to the great disadvantage of the innovator”<sup>60</sup>. Once a dominant design emerges the competition shifts from design fundamentals to price, thus making again room for imitators that introduce improvements providing lower prices and/or better quality of the initial innovation<sup>61</sup>.

As mentioned above the strategic decision on the mode for market entry, should match the environmental conditions. There are not many empirical studies on the effectiveness of the strategic choices made by pioneers and followers under different environmental circumstances<sup>62</sup>. According to presented frameworks imitation is expected to be particularly relevant in highly turbulent and competitive environments<sup>63</sup>. Hence, it is assumed that a stable demand encourages innovators to make significant investments in production capacity by providing opportunities for production and market scale economies<sup>64</sup>. Yet, as demand becomes increasingly uncertain an accurate identification of customer needs becomes drastically more challenging. Thus, the risk of mismatch between rapidly changing preferences of customers and introduced value at early entry is expected to rise significantly<sup>65</sup>. The modest empirical findings presented in the literature in general confirm formulated

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<sup>57</sup> S.P. Schnaars, *Managing...*, op.cit., p. 198-199;

<sup>58</sup> M.B. Lieberman, D.B. Montgomery, *First-mover...*, op.cit., p. 1112;

<sup>59</sup> D.J. Teece, *Managing...*, op.cit., p. 108;

<sup>60</sup> *Ibidem*, p. 98;

<sup>61</sup> *Ibidem*, p. 97;

<sup>62</sup> M.B. Lieberman, D.B. Montgomery, *First-mover...*op.cit.;

<sup>63</sup> *Ibidem*; R.A. Kerin, R.R. Varadarajan, R.A. Peterson, *First-mover ...op.cit.*; S.P. Schnaars, *Managing...*, op.cit.; O. Shenkar, *Copycats...*, op.cit.;

<sup>64</sup> *Ibidem*;

predictions that if demand becomes more turbulent the advantages of being a pioneer are likely to diminish and the imitation strategy appears to be a more effective one<sup>66</sup>. However, the limited number of studies that empirically assess the impact of demand uncertainty on the effectiveness of innovation versus imitation strategies does not provide a sound ground formulating clear recommendations.

In case of competition intensity the results presented in the literature are not fully conclusive. Some authors claim that more intensive market competition makes the advantages from innovation temporary and thus decreases incentives for innovation<sup>67</sup>. The argument is that the need for a quick decision making prompts economizing on time and costs of research and analysis, and that in turn leads to imitation of competitors perceived as holding superior information<sup>68</sup>. However, other research works present completely contradictory findings indicating that more intensive competition triggers innovation<sup>69</sup>. There are also suggestions of inverted-U relationships, indicating that only moderate levels of competition foster innovation while extreme conditions hamper innovative behavior<sup>70</sup>. In studies assuming heterogeneity of innovative behavior the impact of competitive pressure on propensity to innovate depends on the market position of a particular firm, so that a weak competition encourages less efficient firms to innovate, whereas more intensive competition provides incentives for market leaders to innovate<sup>71</sup>. Such profound diversity of conclusions indicate a need for a further exploration towards a methodological synthesis of utilized research frameworks.

Nevertheless, the most often discussed issue concerning favorable conditions for innovation development and diffusion is the extent of intellectual property rights (IPR) protection. According to the Schumpeterian view IPR protection represents a key mechanism providing incentives for firms to engage in innovation process as it provides better appropriation of benefits generated from innovation. Following that perspective, a reduction and inefficiency of IPR protection induces imitation and discourage innovative performance. However, there are significant findings suggesting that the innovation-fostering impact of

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<sup>65</sup> R.A. Kerin, R.R. Varadarajan, R.A. Peterson, *First-mover ...* op.cit.;

<sup>66</sup> S.P. Schnaars, *Managing...*, op.cit.; O. Shenkar, *Copycats...*, op.cit.; Nevertheless, the literature presents also contradictory results according to which the unstable demand does not adversely affect the performance of innovators, yet those findings might be biased by the certain idiosyncrasies specific for the Chinese market, since research was based solely on data obtained in China. K.Z. Zhou, *Innovation...*, op.cit.;

<sup>67</sup> O. Silvko, B. Theilen, *Innovation Or Imitation? The effect of spillovers and competitive pressure on firms' R&D strategy choice*, Working Papers, Universitat Rovira I Virgili, Department of Economics, 2011, [[http://dee.uib.es/digitalAssets/194/194532\\_slivko.pdf](http://dee.uib.es/digitalAssets/194/194532_slivko.pdf), Accessed 12.06.2013]

<sup>68</sup> M.B. Lieberman, S. Asaba, *Why do...*, op.cit.;

<sup>69</sup> K.Z. Zhou, *Innovation...*, op.cit.;

<sup>70</sup> *Ibidem*;

<sup>71</sup> O. Silvko, B. Theilen, *Innovation...*, op.cit.;

intellectual property regimes is rather confined to a fairly narrow segment of the economy (rarely utilized in most service sectors, e.g. tourism industry)<sup>72</sup>. Hence, as declared by managers, the level of legal protection afforded to innovative products is in most cases ineffective<sup>73</sup>. Profound empirical studies found that patents commonly recognized as the most powerful legal protection mechanism and a symbol of innovation, in practice are not a very challenging barrier to imitators, which commonly utilize patent disclosures and reverse engineering. Within four years 60 percent of the patented products covered by the study have been copied<sup>74</sup>. Therefore, it is not surprising to read empirically supported arguments, that “stronger imitation fosters innovative efforts by incumbent firms and patent protection can block the future development of technologies”<sup>75</sup>. However, numerous research works confirm that the impact of IPR protection policy on innovative behavior differs among industries (strongest impact and highest efficiency of IPR protection were recorded in biotechnology and pharmaceutical industry)<sup>76</sup>. Hence, an extensive usage of patents in high-tech sectors is based not only on their rather unsatisfactory protective power but even more likely due to their strategic function in strengthening the bargaining power of firms in cross-licensing. Developing high-tech products requires multiple sourcing of industry knowledge and building a wide patent portfolio protects firms more often against claims of intellectual property infringement rather than imitative practices of competitors<sup>77</sup>.

## 5. Conclusions

The analysis of available research works on imitation and innovation allowed for a conclusion that existing studies are focused mostly on direct comparison of the performance differences between pioneers and followers. There is an evident lack of a cohesive approach to a thorough exploration of the conditions influencing the effectiveness of alternative paths for seizing market opportunities. Different internal and environmental factors are studied independently through diverse methodological approaches. Hence, the literature presents a broad array of inconclusive results that to a large extent obscure the picture of the problem. Meanwhile the business practice indicates dynamically increasing complexity of innovation processes that require diverse hybrid competences as result of manifold technology linkages

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<sup>72</sup> D.J. Teece, *Managing...*, op.cit. p. 116;

<sup>73</sup> E. Mansfield, *How rapidly...*, op.cit.; T. Fischer, *Managing Value Capture: Empirical Analyses of Managerial Challenges in Capturing Value*, Gabler Verlag – Springer Fachmedien Wiesbaden GmbH, Heidelberg 2011.

<sup>74</sup> E. Mansfield, *How rapidly ...*, op.cit.;

<sup>75</sup> O. Silvko, B. Theilen, *Innovation...*, op.cit.;

<sup>76</sup> E. Mansfield, *How rapidly...*, op.cit.;

<sup>77</sup> Fischer T., *Managing ...*, op.cit.;

and interdependencies. Firms are being systematically forced to search for and access necessary competencies and resources outside their boundaries, and thus to modify their strategic orientation towards balancing innovative and imitative practices in performed value creation processes. Therefore, further research should be focused on the synthesis of knowledge aiming at formulating a comprehensive methodological framework of decision process concerning selecting the most appropriate approach to value creation in the a given context.

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