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THE EUROPEAN UNION TNCs' INVESTMENT STRATEGIES OF INNOVATION DEVELOPMENT

Abstract. *Purpose:* Integrating institutional and technological innovations into manufacturing process poses a challenge to Ukraine considering apparent flaws of its industrial enterprises' ineffective as well as out-of-date investment strategies. The European Union TNCs' high innovative performance as a result of their up-to-date investment strategies is a vivid instance of successful innovation and investment development management. As there is growing evidence of the European integration prospects of Ukraine, the European Union TNCs' analysis may shine a light on the questions surrounding selection of the best suited investment strategies for Ukrainian industrial enterprises. *Methods:* We examine the interplay between innovation development and investment strategies of the EU TNCs, integrating methods of abstraction, deduction and induction, as well as statistical technique. *Results:* Taking into account the essence of investment strategies, we suggest that their basic objectives are: improvement in quality of goods; price reduction with no changes in other strategies; cost saving based on new technology, industrial engineering modes, labor and general management enhancement; capacity expansion (step-up in sales) with no changes in other strategies; market development. The aggregate R&D financing of the top 1 000 European Union TNCs has increased from 112.9 billion euros to 152.9 billion euros. So, the total growth has amounted to 40.044 billion euros, in other words, it has grown by 35.5 percent. The average annual level of aggregate R&D financing during this period accounted for 130.5 billion euros. In line with aggregate indicators, the R&D financing per TNC has shown the similar dynamics. The aggregate financing of enterprise innovation and investment activity in Ukraine in hryvnias reached the peak of 14.334 billion hryvnias (1.293 billion euros) in 2011, but this figure distorts the fact of the actual R&D decline. The highest level of the aggregate financing of enterprise innovation and investment activity in Ukraine was reached in 2007, and the record high equaled 20.739 billion hryvnias (1.870 billion euros) in 2011 hryvnias. *Conclusion:* A global investment strategy of a TNC is a system of long-term measures of specific and sectoral capital investment optimization, developed by management and agreed with shareholders, which involves equal distribution of investment between the North American, European and Asian segments of the world market in order to ensure the global competitiveness of a TNC. A TNC investment cycle is as a determined period from an investment idea initiation to investment product implementation resulting in an economic, social, ecological development level of a new quality or modernization of technology and management system. Relevance of the TNC's investment strategy development is determined by such basic conditions: future shift in its life cycle stages, which have their own level of innovation and investment activity; change in goals of a TNC operational activity, which is connected with new commercial opportunities resulting in investment activity growth. An investment cycle of the European Union TNCs is made up of six basic stages: initiation, formation, growth, maturity, decline, new quality shift. The European Union TNCs are one of the main driving forces of globalization, integration and internationalization in the modern world.

Keywords: transnational corporation (TNC); European Union; innovation development; investment strategy; economic integration.
JEL Classification: F15, F23, F29, F36, F43

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ІНВЕСТИЦІЙНІ СТРАТЕГІЇ ІННОВАЦІЙНОГО РОЗВИТКУ ТНК ЄВРОПЕЙСЬКОГО СОЮЗУ

Анотація. Досліджено інвестиційні стратегії інноваційного розвитку ТНК Європейського Союзу. Охарактеризовано підходи до визначення сутності інвестиційних стратегій ТНК. Проаналізовано сучасні тенденції фінансування НДДКР найбільшими ТНК ЄС. Представлено базові тренди НДДКР українських промислових підприємств.

Ключові слова: транснаціональна корпорація (ТНК), Європейський Союз, інноваційний розвиток, інвестиційна стратегія, економічна інтеграція.

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ИНВЕСТИЦИОННЫЕ СТРАТЕГИИ ИННОВАЦИОННОГО РАЗВИТИЯ ТНК ЕВРОПЕЙСКОГО СОЮЗА

Аннотация. Исследованы инвестиционные стратегии инновационного развития ТНК Европейского Союза. Охарактеризованы подходы к определению сущности инвестиционных стратегий ТНК. Проанализированы современные тенденции финансирования НИОКР крупнейшими ТНК ЕС. Представлены базовые тренды НИОКР украинских промышленных предприятий.

Ключевые слова: транснациональная корпорация (ТНК), Европейский Союз, инновационное развитие, инвестиционная стратегия, экономическая интеграция.

Introduction. Nowadays TNCs have a considerable influence on the world economic development. At the moment TNCs are at the stage where foreign investments are the major tool of expansion in the global economy. TNCs largely determine quantitative and qualitative structure of the global bulk of investment, facilitate national economic development. Moreover, TNCs stimulate international innovation and technological cooperation implementing appropriate investment strategies.

Integrating institutional and technological innovations into manufacturing process poses a challenge to Ukraine considering apparent flaws of its industrial enterprises' ineffective as well as out-of-date investment strategies. The European Union TNCs' high innovative performance as a result of their up-to-date investment strategies is a vivid instance of successful innovation and investment development management. As there is growing evidence of the European integration prospects of Ukraine, the European Union TNCs' analysis may shine a light on the questions surrounding selection of the best suited investment strategies for Ukrainian industrial enterprises.

Brief Review of Literature. An extensive body of literature exists on investment strategies. For instance, Blank (2001) [1] views investment strategy as a process of shaping the system of long-term goals of investment activity and selection of the most effective ways to achieve these goals.

Duka (2007) [2] argues that investment strategy serves the purpose of safeguarding of the further investment activity development based on the prediction of investment intention implementation conditions and state of the investment market in general and its segments in particular.

Vovchak (2007) [3, p. 337] determines enterprise investment strategy as a system of investment activity long-term goals and selection of the most effective ways to achieve these goals considering the state of the investment market in general and its segments in particular.

Klivets (2007) [4, p. 194] suggests a different interpretation of the enterprise investment strategy viewing investment portfolio composition as its main feature. An appropriate investment portfolio secures material and technical basis, inventory holdings for the sake of an enterprise competitiveness enhancement. Shaping the enterprise investment strategy allows determination the real needs for re-equipment, modernization, reconstruction, timing and funding.

Illyashenko (2003) [5, p. 180] defines enterprise innovation development investment strategy as a dynamic process of providing a developing enterprise, resting on new technology, industrial engineering modes and management, new products and manners of the sale in a changeable external environment, with necessary resources.

Fedorenko (2002) [6, p. 21] argues that enterprise investment strategy includes investment project evaluation and selection of financial investment tools. Investment strategy suitability is determined by such criteria as: funding consistency; effectiveness; timing; optimization of risks and profitability; compliance with external economic conditions.

In spite of continuous scientific discussion of the mutual influence of enterprise innovation development and investment strategies, the researchers in the whole remain in the dark about what can ensure successful modernization of Ukrainian industry in connection with its European integration prospects.

So, **the purpose** of this article is to give an overview of the issues related to innovation development investment strategies of the European Union TNCs, namely to disclose the interplay between innovation development objectives and investment strategies of the EU TNCs in the context of future programs for modernization of Ukrainian industry.

Results. There is an enormous diversity of corporate investment strategies. Each investment strategy is classified according to an enterprise's country of origin, region of operation, economic sector, goods, level of technology etc. Shaping the investment strategy rests on the general corporate economic development strategy, which consists of such goals as international market penetration and maintenance, profit growth, restructure of international investment etc.

Taking into account the essence of investment strategies, we suggest that their basic objectives are (Table 1):

Objective I – improvement in quality of goods. This strategy leads to a higher profit, but implies a significant risk.

Objective II – price reduction with no changes in other strategies. This strategy is aimed at market penetration, boosting sales, implementation of new technology. As a rule it results in profit crunch.

Objective III – cost saving based on new technology, industrial engineering modes, labor and general management enhancement. This strategy generates profit markup.

Objective IV – capacity expansion (step-up in sales) with no changes in other strategies. This strategy increases profit due to economy of scale.

Objective V – market development. This strategy stimulates profit growth.

Tab. 1: **Basic Types and Objectives of Investment Strategies of the European Union TNCs**

Corporate Investment Strategy	Basic Objectives				
	I	II	III	IV	V
Expansion of Production Strategy	+	+	+	+	+
Concentrated (Intensive) Growth Strategy	+	+	+	+	+
Continuous Improvement (Kaizen) Strategy	+	+	+	+	
Market Development Strategy			+		+
Product Innovation Strategy	+		+		+
Market Penetration Strategy					+
Markets' Development Strategy		+	+	+	
Product Development Strategy	+	+	+	+	
Integrated Growth Strategy	+	+	+	+	+
Vertical Integration Strategies			+	+	+
«Backwards» Vertical Integration Strategy			+		
«Forward» Vertical Integration Strategy			+		
Horizontal Integration Strategy			+		
Diversification Strategies					+
Concentric Diversification Strategy					+
Horizontal Diversification Strategy					+
Conglomerate Diversification Strategy					+
Task-oriented Reduction Strategy					+
Cost Reduction Strategy			+		
Combined Strategy					+
Stock Exchange Strategy	This strategy implies elaboration of fund-raising rules aimed at investment and current financial task-solving. So, the strategy fosters the achievement of the above-mentioned objectives.				

Source: Frolova's suggestion

Implementation of different types of innovations permits to achieve goals of corporate investment strategies (Table 2).

As TNCs take part in the global economic competition, they, as a rule, exploit some kind of a global investment strategy. The absence of such a strategy frequently causes losing of the competitive edges of the European Union TNCs.

Frolova (2012) [7, p. 86] puts forward the following definition of a global investment strategy of a TNC: a system of long-term measures of specific and sectoral capital investment optimization, developed by management and agreed with shareholders, which involves equal distribution of investment between the North American, European and Asian segments of the world market in order to ensure the global competitiveness of a TNC.

Relevance of the TNC's investment strategy development is determined by such basic conditions: future shift in its life cycle stages, which have their own level of innovation and investment activity; change in goals of a TNC operational activity, which is connected with new commercial opportunities resulting in investment activity growth. Frolova (2012) [8, pp. 259-260] points out that an investment cycle of the European Union TNCs is made up of six basic stages: initiation, formation, growth, maturity, decline, new quality shift.

Tab. 2: **The Interplay between Innovations and Goals of Investment Strategies of the European Union TNCs**

Basic Innovations Needed	Basic Objectives of Corporate Investment Strategies				
	I	II	III	IV	V
Creation of a brand new product based on inventions	+		+		+
Improvement in a product based on know-how	+				
Introduction of a new technology based on inventions			+		
Improvement in current technology based on know-how			+		
Improvement in labor management based on know-how			+		
Improvement in industrial engineering based on know-how			+		
Formation of or improvement in management system	+		+	+	+
Improvement in quality of corporate input (raw products, materials, accessories etc.)	+				
Improvement in interaction between a TNC and its external environment	+		+		
Improvement in functioning of operational (innovation) marketing (advertisement, promotion etc.)					+
Improvement in customer support				+	
Market expansion		+			+
Market penetration					+

Source: Frolova's suggestion

averted harm seems to be a reasonable indicator of ecological efficiency of investment strategy implementation.

In line with the insights stated above, a TNC investment cycle can be defined as a determined period from an investment idea initiation to investment product implementation resulting in an economic, social, ecological development level of a new quality or modernization of technology and management system [7, p. 293]. The adequate investment strategy fosters the overall economic efficiency, introduction of the best scientific and technological inventions into process organization.

The European Union TNCs possess significant capital, research centers and production facilities, so they exert profound influence on international business on regional and global scale. Primarily economic interests penetrate into political, social and multicultural environment provoking structural changes in the global system. The European Union TNCs are one of the main driving forces of globalization, integration and internationalization in the modern world.

Table 3 reveals the overall R&D performance of the top 1 000 European Union TNCs in 2005-2011. From the table we can see that the aggregate R&D financing has increased from 112.9 billion euros to 152.9 billion euros. So, the total growth has amounted to 40.044 billion euros, in other words, it has grown by 35.5 percent. The average annual level of aggregate R&D financing during this period accounted for 130.5 billion euros. In line with aggregate indicators, the R&D financing per TNC has shown the similar dynamics.

The aggregate sales of the top 1 000 European Union TNCs, in turn, has rocketed to 6.361 trillion euros in 2005-2011 increasing by 1.854 trillion euros (41.1 percent). The average annual aggregate sales during this period equaled 5.556 trillion euros. The top 1 000 European Union TNCs employed over 20.268 million people, so the number of employees grew by 3.845 million people or 22.5 percent in 2005-2011.

The aggregate financing of enterprise innovation and investment activity in Ukraine in hryvnias reached the peak of 14.334 billion hryvnias (1.293 billion euros) in 2011, but this figure distorts the fact of the actual R&D decline. Figure indicates that the highest level of the aggregate financing of enterprise innovation and investment activity in Ukraine was reached in 2007, and the record high equaled 20.739 billion hryvnias (1.870 billion euros) in 2011 hryvnias. The conducted calculations are based on GDP deflator.

Conclusions. A global investment strategy of a TNC is a system of long-term measures of specific and sectoral capital

The essence of these stages can be illustrated by the following explanation. The initiation stage implies the actual initiation of an investment idea connected with learning of opportunities of foreign market penetration by means of foreign direct investments. At this stage a TNC makes two groups of strategic decisions concerning the selection process of foreign market penetration and organizational modes. The first group deals with control over overseas enterprises, for instance, the choice between a subsidiary and a joint venture. The second group aims at selection of penetration modes, for example, the choice between a Greenfield strategy (creation of a brand new enterprise) and a Brownfield strategy (acquisition of an existing one). At the initiation stage a TNC also makes provisions for sufficient amount of fixed and working capital to start an overseas activity. The Brownfield strategy is considered to be the best market penetration method, whereas the Greenfield strategy is designed to avoid high cost of adaptation to a new market.

At the stage of formation a TNC consolidates its market share, fixed and working capital.

The growth stage becomes apparent through market share expansion due to real and financial investment portfolio optimization.

The maturity stage involves the essential activity expansion, investment portfolio optimization, financial investment expansion, establishment of subsidiaries, venture capital investment.

The decline stage is the inevitable outcome of the lack of motivation and innovation decisions. At this stage a TNC needs to stabilize its activity and investments in order to ensure gained output and sales.

The new quality shift is the substantial renewal of activity spheres and product markets by means of investment portfolio diversification and additional alternative investment aimed at successful investment project implementation and technological modernization.

Transition to a new TNC investment cycle stage depends on investment strategy implementation results and effects, mainly economic and social ones. In recent times – particularly the last 10 years – researchers have paid more attention to the necessity for distinction of economic and social effects. An investor is not only profit-oriented. Concord of economic and social aspects accounts for the positive synergy effect. In addition to social and economic indicators there are ecological criteria which contribute to a successful investment activity realization. Ecological indicators have become the basis of the modern concept of sustainable growth of TNCs [9, pp. 75-83]. The

Tab. 3: **Aggregate R&D of the Top 1 000 European Union TNCs in 2005-2011**

Years	2005	2006	2007	2008	2009	2010	2011	Average	Change	
									absolute	%
R&D Financing										
Aggregate, billion euros	112.9	121.1	126.4	130.4	130.0	139.7	152.9	130.5	40.0	35.5
Average, million euros	112.9	116.0	121.4	130.4	130.0	139.7	152.9	129.0	40.0	35.5
Sales, billion euros										
Aggregate	4 507.0	5 156.1	5 515.1	5 711.8	5 408.4	6 233.6	6 361.3	5 556.2	1 854.3	41.1
Average	4.5	5.2	5.7	5.7	5.4	6.2	6.6	5.62	2.1	45.7
R&D Intensity, %										
Average	2.50	2.35	2.29	2.28	2.40	2.24	2.40	2.35	-0.10	-3.8
Employees, million people										
Aggregate	17.123	18.791	20.298	21.025	21.697	21.978	20.968	20.268	3.845	22.5
R&D Financing per Employee, thousand euros										
Average	6.584	6.445	6.221	6.194	5.985	6.351	7.293	6.439	0.709	10.8

Source: Frolova's suggestion

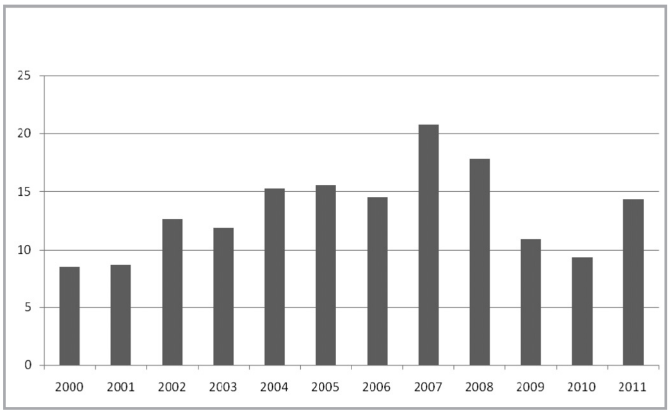

Fig. : **Financing of Aggregate Industrial Innovation and Investment Activity in Ukraine in 2000-2011 (prices of 2011), billion hryvnias**
Source: Tokar (2013) [17, p. 129]

investment optimization, developed by management and agreed with shareholders, which involves equal distribution of investment between the North American, European and Asian segments of the world market in order to ensure the global competitiveness of a TNC. A TNC investment cycle is as a determined period from an investment idea initiation to investment product implementation resulting in an economic, social, ecological development level of a new quality or modernization of technology and management system.

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