

**Piddubna L. I.**

*Doctor of Economics,  
Professor Department of International Economics and Management foreign economic activity,  
Kharkiv National University of Economics named after S. Kuznets, Ukraine;  
e-mail: l.i.poddubnaya@gmail.com; ORCID ID: 0000-0002-9471-2820*

**Piddubnyi I. O.**

*Ph. D. in Economics,  
Professor Department of International Economics and Management foreign economic activity,  
Kharkiv National University of Economics named after S. Kuznets, Ukraine;  
e-mail: ivan.piddubnyi@hneu.net; ORCID ID: 0000-0003-3384-3584*

**Proskurnina N. V.**

*Ph. D. in Economics,  
Associate Professor Department of International Economics  
and Management foreign economic activity,  
Kharkiv National University of Economics named after S. Kuznets, Ukraine;  
e-mail: nadiyaproskurnina@gmail.com; ORCID ID: 0000-0001-8587-0467*

**Gorobinska M. V.**

*Ph. D. in Economics,  
Associate Professor Department of International Economics  
and Management foreign economic activity,  
Kharkiv National University of Economics named after S. Kuznets, Ukraine;  
e-mail: gorobinskayam@gmail.com; ORCID ID: 0000-0002-4296-8234*

## **PECULIARITIES OF BUILDING THE VALUE CHAIN OF THE IT-INDUSTRY OUTSOURCING ENTERPRISES**

**Abstract.** The active development of information and communication technologies and the enhancement of their impact on the world economy requires the search for new and adaptation of existing tools and mechanisms of competitiveness management for the needs of the IT-industry subjects. The peculiarities of building the value chain of the IT-industry enterprises have been considered and the volumes of the global IT-companies market have been analyzed. When using the value chain concept, an enterprise has the ability to identify and focus efforts on generating high-order competitive advantages, which are relevant for high-tech IT-companies. The value creation chain helps to divide all kinds of activities into strategic groups for a detailed analysis of the company, on the basis of which managers can better evaluate the stages at which the value of the product is created and where the work of the enterprise can be optimized.

The necessity of adjusting the management of these IT-companies to determine their competitive advantages has been substantiated. The competitiveness of the company has been evaluated in the context of the influence of the main competitive forces and the main threats have been identified. The directions of value chain modification for the needs of TEAM International Services Inc. have been determined. An IT-industry value chain has been offered. It consistently demonstrates the main and accompanying activities that shape product value on the example of US outsourcing company TEAM International Services Inc. It is defined that in the process of building a value chain for an outsourced IT-company, it is expedient to take into account the main stages of a software product pricing. Such approach allows influence the company competitiveness, isolate sources of international competitive advantages of the IT-industry enterprises, namely: continuous technological modernization, use of qualitative licensed software, adaptability of corporate policy and culture, wide opportunities for company employees.

**Keywords:** IT-industry, outsourcing company, value creation chain concept, IT company value chain, software product, competitive advantages, competitiveness.

**JEL Classification** G32, L1, L86

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**Піддубна Л. І.**

доктор економічних наук,  
професор кафедри міжнародної економіки та менеджменту  
зовнішньоекономічної діяльності,  
Харківський національний економічний університет ім. С. Кузнеця, Україна;  
e-mail: l.i.poddubnaya@gmail.com; ORCID ID: 0000-0002-9471-2820

**Піддубний І. О.**

кандидат економічних наук,  
професор кафедри міжнародної економіки та менеджменту  
зовнішньоекономічної діяльності,  
Харківський національний економічний університет ім. С. Кузнеця, Україна;  
e-mail: ivan.piddubnyi@hneu.net; ORCID ID: 0000-0003-3384-3584

**Проскурніна Н. В.**

кандидат економічних наук,  
доцент кафедри міжнародної економіки та менеджменту зовнішньоекономічної діяльності,  
Харківський національний економічний університет ім. С. Кузнеця, Україна;  
e-mail: nadiyaproskurnina@gmail.com; ORCID ID: 0000-0001-8587-0467

**Горобинська М.В.**

кандидат економічних наук,  
доцент кафедри міжнародної економіки та менеджменту зовнішньоекономічної діяльності,  
Харківський національний економічний університет ім. С. Кузнеця, Україна;  
e-mail: gorobinskayam@gmail.com; ORCID ID: 0000-0002-4296-8234

## **ОСОБЛИВОСТІ ПОБУДОВИ ЛАНЦЮГА ВАРТОСТІ АУТСОРСИНГОВИХ ПІДПРИЄМСТВ ІТ-ГАЛУЗІ**

**Анотація.** Активний розвиток інформаційно-комунікаційних технологій і посилення їхнього впливу на світову економіку вимагає пошуку нових і пристосування наявних інструментів та механізмів управління конкурентоспроможністю під потреби суб'єктів ІТ-галузі. Розглянуто особливості побудови ланцюга вартості підприємств ІТ-галузі та проаналізовано обсяги світового ринку ІТ-компаній. Ланцюг створення вартості допомагає розділити всі види діяльності на стратегічні групи задля детального аналізу компанії, на основі якого менеджери зможуть краще оцінити етапи, на яких створюється вартість продукту і де можна оптимізувати роботу підприємства. Посилення впливу ІТ-компаній на економічний розвиток потребує визначення особливостей менеджменту цих організацій та змін під їхні потреби наявних інструментів аналізу. Обґрунтовано необхідність коригування менеджменту ІТ-компаній для визначення їхніх конкурентних переваг. Проведено оцінку конкурентоспроможності компанії у рамках впливу основних конкурентних сил і виявлено основні загрози. Визначено напрями модифікації ланцюга вартості під потреби компанії TEAM International Services Inc. Запропоновано ланцюг вартості підприємств ІТ-галузі, який послідовно демонструє основні та супровідні види діяльності, що формують вартість продукту на прикладі американської аутсорсингової компанії TEAM International Services Inc. Визначено, що у процесі побудови ланцюга вартості для аутсорсингової ІТ-компанії доцільно враховувати основні етапи формування вартості програмного продукту. Такий підхід дозволяє вплинути на конкурентоспроможність компанії, виокремити джерела міжнародних конкурентних переваг підприємств ІТ-галузі, а саме: постійна технологічна модернізація, використання якісного ліцензованого програмного забезпечення, адаптивність корпоративної політики і культури, широкі можливості для працівників компанії.

**Ключові слова:** ІТ-галузь, аутсорсингова компанія, концепція ланцюга створення цінності, ланцюг вартості ІТ-компанії, програмний продукт, конкурентні переваги, конкурентоспроможність.

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**Поддубная Л. И.**

доктор экономических наук,  
профессор кафедры международной экономики и менеджмента  
внешнеэкономической деятельности,  
Харьковский национальный экономический университет им. С. Кузнеца, Украина;  
e-mail: l.i.poddubnaya@gmail.com; ORCID ID: 0000-0002-9471-2820

**Поддубный И. А.**

доктор экономических наук,  
профессор кафедры международной экономики и менеджмента  
внешнеэкономической деятельности,  
Харьковский национальный экономический университет им. С. Кузнеца, Украина;  
e-mail: ivan.piddubnyi@hneu.net; ORCID ID: 0000-0003-3384-3584

**Проскурнина Н.В.**

кандидат экономических наук,  
доцент кафедры международной экономики и менеджмента  
внешнеэкономической деятельности,  
Харьковский национальный экономический университет им. С. Кузнеца, Украина;  
e-mail: nadiyaproskurnina@gmail.com; ORCID ID: 0000-0001-8587-0467

**Горобинская М.В.**

кандидат экономических наук,  
доцент кафедры международной экономики и менеджмента  
внешнеэкономической деятельности,  
Харьковский национальный экономический университет им. С. Кузнеца, Украина;  
e-mail: gorobinskayam@gmail.com; ORCID ID: 0000-0002-4296-8234

## **ОСОБЕННОСТИ ПОСТРОЕНИЯ ЦЕПОЧКИ СТОИМОСТИ АУТСОРСИНГОВЫХ КОМПАНИЙ ИТ-ОТРАСЛИ**

**Аннотация.** Рассмотрены особенности построения цепочки стоимости предприятий ИТ-отрасли и проанализированы объемы мирового рынка ИТ-компаний. Обоснована необходимость корректировки менеджмента этих организаций для определения их конкурентных преимуществ. Определены направления модификации цепочки стоимости с учетом потребностей компании TEAM International Services Inc. Проведена оценка конкурентоспособности компании в рамках влияния основных конкурентных сил и выявлены основные угрозы. Предложена цепочка стоимости предприятий ИТ-отрасли, которая последовательно демонстрирует основные и сопутствующие виды деятельности, формирующие стоимость продукта на примере американской аутсорсинговой компании TEAM International Services Inc.

**Ключевые слова:** ИТ-отрасль, аутсорсинговая компания, концепция цепочки создания ценности, цепочка стоимости ИТ-компаний, программный продукт, конкурентные преимущества, конкурентоспособность.

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**Introduction.** Operation of any company is a set of actions that are undertaken to design, produce, market, deliver and maintain the competitiveness of their products or services in the target market. In today's dynamic conditions of competition development in the markets there exists the creation of new tendencies, among which there is a constant monitoring and increase of an innovative component efficiency in the process of development of a new product or service. Factors of production, such as knowledge and information, are beginning to actively influence the value formation of a product, which is one of the prominent factors of long-term economic partnership with all participants in the process of creating the value chain of the enterprise. The active development of information and communication technologies and the enhancement of their impact

on the world economy requires the search for new and adaptation of existing tools and mechanisms of competitiveness management for the needs of the IT-industry subjects.

The purpose of this article is to identify the features of the value chain of outsourced IT-companies as an effective tool for managing their competitive advantages and the competitiveness level.

Value chain is a strategic analysis model that describes and identifies business actions to create value for the consumer and generate competitive advantages. Using of the value chain to determine enterprise competitiveness was first suggested by McKinsey employees in the quarterly «Strategic Choice and Resource Allocation» report in the article «Competitive Value Analysis» [1] in 1980. They built the value chain to create McKinsey competitive advantage management consulting.

In 1985, M. Porter proposed a more sophisticated value chain in his monograph «Competitive Advantage: How to Achieve High Performance and Provide Its Firmness» [2]. The value creation chain helps to divide all kinds of activities into strategic groups for a detailed analysis of the company, on the basis of which managers can better evaluate the stages at which the value of the product is created and where the work of the enterprise can be optimized.

**Research analysis and problem statement.** Modern researches of the concept of formation of the goods (services) consumer (cost) value are reflected in the works of domestic scientists, in particular, Ye.V. Krykavsky, N.I. Chukhray, T.L. Mostenskaya, O.S. Omelnichenko, V. Basilevich and foreign ones, in particular, Steibell Ch.B, Feldstad O.D., Andersen B. [1—7].

Thus, O.S. Omelchenko notes that the concept of the value creation chain accentuates attention not only to the processes occurring inside the enterprise, but also takes into account the processes of the external environment, that is why it is an effective tool for managing the enterprise costs [4].

Krykavskyy Ye.V. and Pator-Vysotska Z. propose to distinguish three stages of the value chain functioning: stage 1 — construction of the value chain using M. Porter model; stage 2 — deconstruction (analysis) — identification of contradictions, disorganizing elements, unnecessary processes that do not add value; stage 3 — reconstruction (synthesis) — creation of a new value chain [3].

Scholars B. B. Stabell and O. D. Feldstad have introduced the concepts of «value creation workshop» and «value creation network», which are the basis for an alternative value chain model [8].

When using the value chain concept, an enterprise has the ability to identify and focus efforts on generating high-order competitive advantages, which are relevant for high-tech IT-companies. But the peculiarities of using the cost (value) model to manage the competitiveness of IT-companies are not sufficiently covered in scientific literature.

**Research results.** The IT-industry is rapidly maturing, leading to a steady increase in competition in all its segments. The impact of information and communication technologies on business has led to an increase in the financial result of IT-companies and their ousting of companies operating in the traditional fields of extractive industry and production from the first places in the financial rating (*Table 1, Fig. 1*).

Table 1

Global Top companies with the largest absolute increase in market capitalisation 2019 vs. 2009

Company name (\$bn)	Sector	Change in market capitalisation 2009-2019	Market capitalisation 2019 (\$bn)	Market capitalisation 2009 (\$bn)
Amazon.com	Consumer Services	843	875	31
Apple	Technology	802	896	94
Microsoft	Technology	742	905	163
Visa	Financials	272	314	42
JP Morgan	Financials	232	331	100

Source: compiled by the author according to statistical reporting [9].

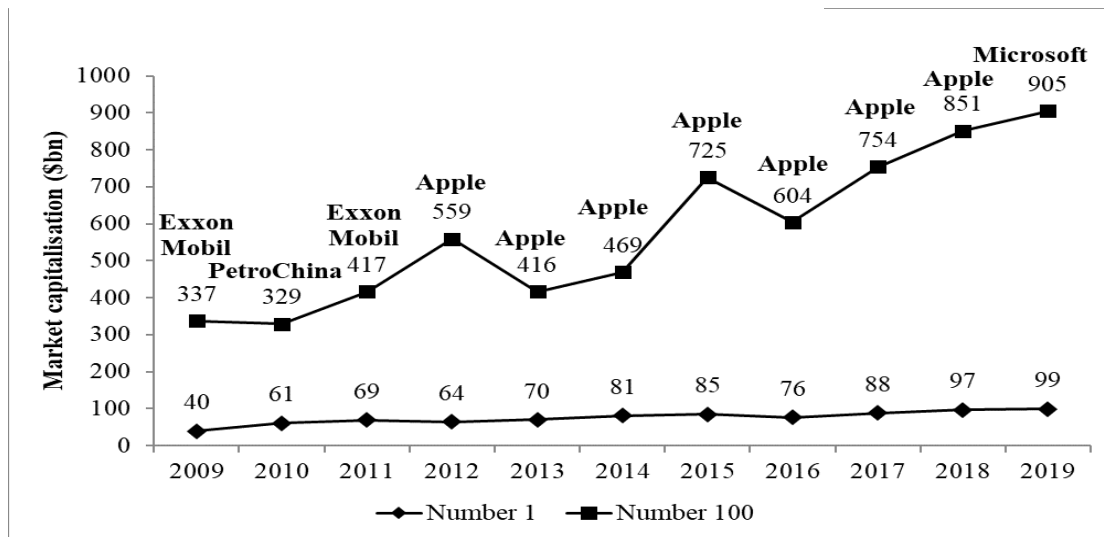


Fig. 1. Market capitalisation of top and bottom companies

Source: [9].

In 2019, the global ICT market reached \$ 3.74 trillion, an increase of 0.5% from 2018 (Table 2), more than double the capacity of the oil market.

Table 2

Development of components of the ICT market in 2019

Components	2019 p.	
	Spending, trillion US doll.	Growth, %
Data Center Systems	0.205	-2.7
Enterprises Software	0.456	8.5
Devices	0.682	-4.3
IT Services	1.030	3.6
Communications Services	1.364	0.5
Overall ICT	3.737	0.5

Source: compiled by the author according to statistical reporting [10].

The highest growth — by 8.5% to \$ 456 billion — in 2019 is demonstrated by annual sales of corporate software. For the first time ever, IT spending exceeded \$ 1 trillion and amounted to \$ 1.03 trillion. This segment has shown an increase of 3.6%, which is almost the best dynamic among all ICT categories. According to a Gartner poll, 46% of organizations say IT services and provider consolidation are among the three most effective expenditure optimization methods.

Thus, the IT-companies impact intensification on economic development requires identifying management features of these organizations and adjusting the existing tools of analysis and identifying competitive advantages to their needs. At present, Ukraine is one of the most promising high technology and innovation markets in Central and Eastern Europe, being in the process of integrating Ukrainian markets with the EU countries markets, receives a strong impetus for the active integrated development of its own IT-sector, the most developed and the most economically advanced segment in Ukraine [11]. Since most of the domestic companies in this field are outsourced, taking into account characteristics of these organizations is advisable in developing methodological recommendations for determining competitive advantages and assessing the level of competitiveness of individual IT-enterprises [12].

The problem of maintaining its positions in the market and increasing its own competitiveness is a pressing issue for any IT-company, as the finding of the optimal competitive advantage strategy based on the value chain of outsourced IT-companies is a key to success in growing competition.

Table 3 shows the analysis results of the enterprise TEAM International Services Inc. competitiveness modelled on M. Porter five competitive forces in the context of considering their impact on the competitive positions of the company.

Table 3

The analysis of the impact of five competitive forces on TEAM International Services Inc. competitive position

Power competition	The degree of influence	Characteristic
Appearance of substitute products	Average	In the IT market, there is a high likelihood of analogs to those software products being developed by firms. However, with TEAM International's focus on meeting the needs of most regular customers with the development of customized IT products, it can be concluded that the degree of impact of the substitute products occurrence is medium.
Intra-industry competition	High	The IT market is highly competitive. Its main leaders — EPAM, Luxoft — are represented in the US, Ukraine. The range of technologies and platforms they use is much larger than those used by TEAM International in its activities. In addition, according to many ratings, EPAM, Luxoft, Ciklum are among the leaders in the global IT market, while TEAM International is a growing company.
The emergence of new competitors	Average	The IT industry is growing fast, so the number of new competitors is growing every year, despite the average level of investment. However, the emergence of a new competitor in one market may not interfere with the company's activities in the same company with another one, so the geographical diversification of activities owned by TEAM International can significantly reduce the risks of new competitors.
Loss of customers	High	The client structure of TEAM International accounts for almost 53% of regular customers who have been cooperating with the company for a long time and are key factors in shaping the company's profit. The loss of such customers can significantly threaten the enterprise.
Instability of suppliers	Low	IT vendors can be understood as software companies using enterprise software and computer hardware. As the current IT market is sufficiently developed, with the loss of one software provider, one can find an analog.

As to the competitive position of TEAM International Services Inc. it is strongly influenced by intracranial competition and customers, which is an incentive to improve the competitive strategy in marketing and production.

TEAM International Services Inc. Competitiveness Analysis 2015—2017 (Table 4) allows us to estimate the competitive position in the dynamics.

Table 4

Performance Indicators for TEAM International Services Inc. using the method based on effective competition theory in 2015—2017

Competitiveness Criteria and Indicators	2015	2016	2017
<i>Efficiency of the enterprise production activity</i>			
Development costs of 1 software, thousand UAH	544.28	527.22	528.40
Software Profitability, %	1.96	2.11	1.97
Labor productivity, thousand UAH / person	16.52	19.69	19.71
The coefficient of the total staff movement	0.25	0.22	0.28
<i>Financial condition of the enterprise</i>			
Autonomy ratio	0.92	0.96	0.91
Current ratio	20.11	1.,11	8.50
Absolute liquidity ratio	4.94	4.62	2.96
The turnover ratio of working capital is	0.19	0.17	0.22
<i>Efficiency of sales organization and goods promotion</i>			
Return on sales, %	0.67	0.65	0.65
Clutch.com rating	4.30	4.60	4.75
Number of regular customers	6.00	7.00	10.00
The efficiency ratio of advertising and sales promotion	-0.06	0.81	0.24
<i>Product Competitiveness</i>			
Quality software / addition	5	6	7

Thus, most of the indicators were improved between 2015 and 2017, indicating that TEAM International Services Inc. has increased its competitiveness. *Table 5* presents the group and overall competitiveness ratios of the company in 2016, 2017.

Table 5

The result of TEAM International Services Inc. competitiveness ratio calculations  
in 2016, 2017

<b>Indicator</b>	<b>2016</b>	<b>2017</b>
Efficiency of the enterprise production activity	1.65	1.87
Financial state of the enterprise	2.9	3.93
Efficiency of sales organisation and goods promotion	2.78	2.73
Goods competitiveness	3.3	3.3
General competitiveness indicator	10.63	11.82

TEAM International Services Inc. competitiveness analysis has identified the company potential by implementing a value chain to create competitive advantage.

Taking into account the enormous and undeniable impact of the rapid development of information and communication technologies (ICTs) on the world economy, M. Porter value chain does not make it possible to evaluate the value creation process of software because it does not cover specific IT related activities. It will be appropriate to modify M. Porter's Unified Value Chain to consider the main competencies of all organizational units involved in creating software products at TEAM International Services Inc.

The basis of a modified value chain is to lay the process of creating a software or application, starting with a business idea and ending with the decommissioning and utilization of the product. In order to build the value chain of an IT-company, it is necessary first to consider the main steps (stages) related to the development and implementation of the software product (Fig. 2).

Product research activities are related to the process of their conceptualization, which is carried out through the development of the product vision, its fundamental research, the choice of implementation tools.

Operations to select the components of a future IT-product are one of the most important steps in creating it. The choice of components corresponds to entering logistics for industrial enterprises. Product development is a major factor in cost formation as it involves most of the stages of software creation (software development): requirements and action plan development, software design, development, code documentation creation, quality verification and validation.

User documentation-related activities consist of steps that document the principal functionality and features of the end-user software (reviews of the creation of electronic instructions documents that are subsequently passed to the user along with the IT-product) (Fig. 2).

The final product preparation consists of several steps: assembling, production, packaging. Assembling comprises the IT-product integration with the accompanying custom documentation. Manufacturing is a set of actions for building physical carrier containing a software product. Packaging is the final step in pricing a software product, as it involves physical assets responsible for delivering the IT-product to the customer.

The principal feature of IT-products promotion policy is that IT-marketing is focused not only on the sale of a single software product, but also on customer search, which is confirmed by the fact that most IT-companies, together with the marketing department, create a sales department, the main purpose of which is to search potential customs.

Product introduction consists of its installation, adjustment and adaptation. The installation involves the process of transferring program files to the client's information system. The installation phase guarantees that all relevant functions will be performed correctly within a specified time. The configuration of the IT-product involves choosing the parameters and modifications that the customer needs in his activity. The adaptation of the software product is responsible for changes in functionality in the business processes of the client company.

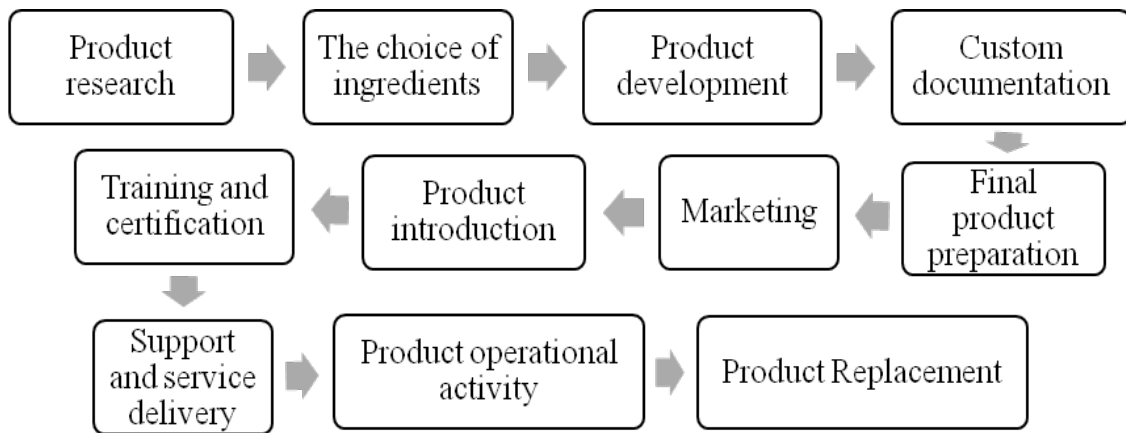


Fig. 2. Basic steps (stages) of IT-product pricing (developed by the authors)

Training and certification activities consist in educating the client company and users how the program works. The certification process is the final level of training that confirms the level of the program mastering by those users who will directly use IT-product in their future activities.

As part of its support and maintenance activities, the software product is updated with new configurations which help to solve system mistakes issues and improve product functionality. Auxiliary maintenance and support operations consist of designing, developing, and validating of software requirements.

Operating activities ensure the performance of software functions in the information system. By constantly monitoring its performance, it is possible to control the system «behavior» and minimize the costs of possible losses. It is necessary to regularly plan, perform, administer and defend regular reserved data copies. An important step of the operational activity is to upgrade the IT-product to its lifecycle stage.

Product replacement actions are usually similar to recycling. The replacement involves «data migration» and shutdown. Further actions depend on the replacement of the existing system by the alternative one or the complete rejection from it. If the customer company decides to introduce an alternative software product, synchronization between the new and existing systems is required. If the customer refuses to fully operate the product, then the software operation will be suspended first, and then non-invasive recycling of confidential information and data used during the lifetime of the IT-product will begin.

Based on the analysis of the main IT value creation actions, it is possible to build a value chain which consistently demonstrates the principal and accompanying activities that form the value of an IT outsourced product, built on the example of US outsourcing company TEAM International Services Inc. (Fig. 3).



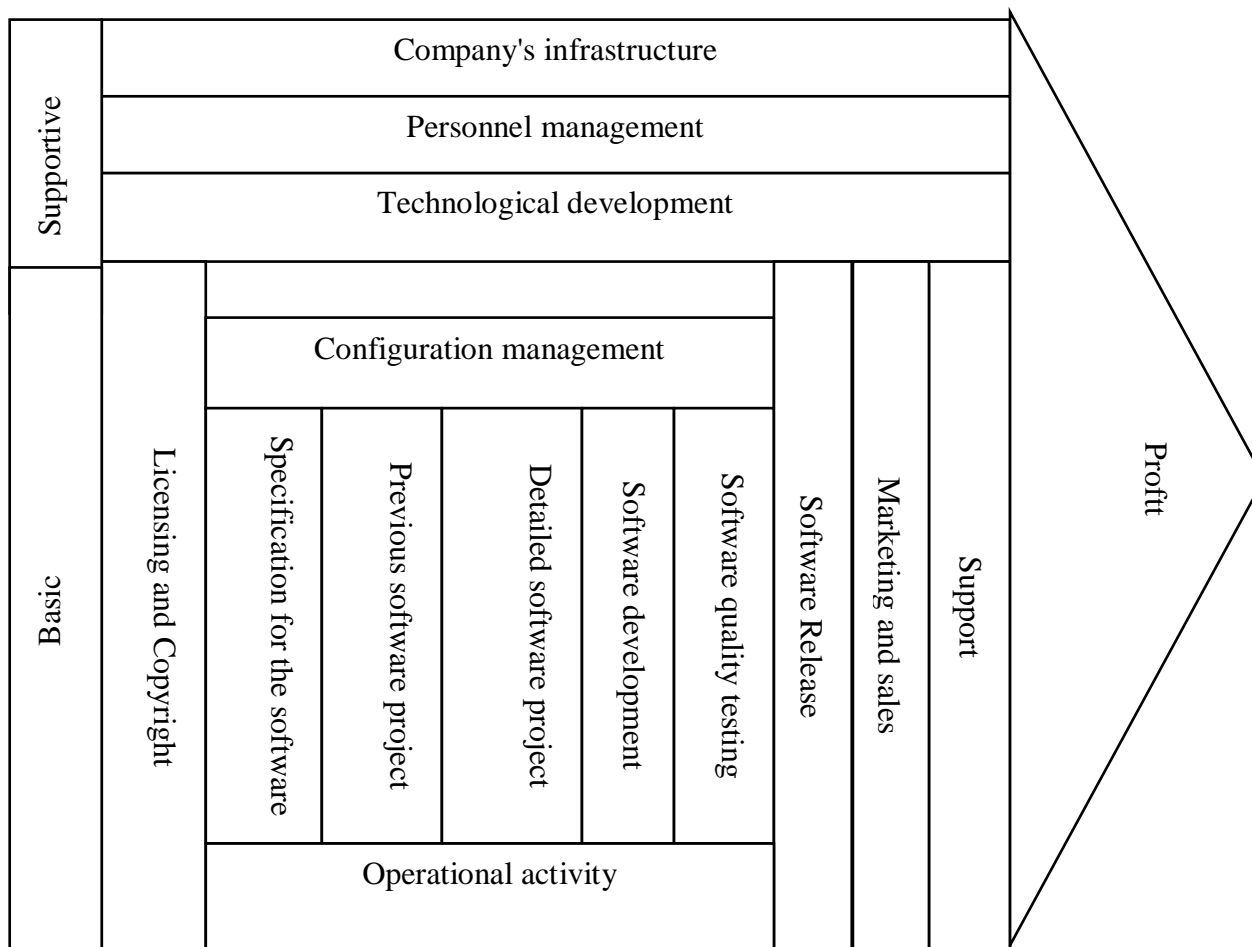


Fig. 3. IT outsourcing company value chain (Developed by the authors)

**Conclusions.** Thus, the assessment of the company's competitiveness in the context of the influence of the main competitive forces has revealed the main threats, among which is growing intra-industry competition and customers loss. Assessment of the dynamics of competitiveness change has shown that the competitiveness of the company has positive dynamics. On the example of TEAM International Services Inc. it has been demonstrated the peculiarities of building the value chain of the IT-industry enterprises and the directions of this tool modification to their needs have been determined. It is defined that in the process of building a value chain for an outsourced IT-company, it is expedient to take into account the main stages of a software product pricing. Such approach allows influence the company competitiveness, isolate sources of international competitive advantages of the IT-industry enterprises, namely: continuous technological modernization, use of qualitative licensed software, adaptability of corporate policy and culture, wide opportunities for company employees.

#### Література

1. The microeconomics of industry supply [Electronic resource]. — Available at : [http://faculty.msb.edu/homak/homahelpsite/WebHelp%20061813/McKinsey\\_The\\_Business\\_System.pdf](http://faculty.msb.edu/homak/homahelpsite/WebHelp%20061813/McKinsey_The_Business_System.pdf).
2. Porter M. E. Competitive advantage: creating and sustaining superior performance / M. E. Porter. — New York : Free press, 1985. — 658 p.
3. Криківський Є. Ланцюг вартості М. Портера (конструкція, деконструкція, реконструкція) та управління за цінностями / Є. Криківський, З. Патора-Висоцька // Маркетинг і менеджмент інновацій. — 2015. — № 2. — С. 121—133.
4. Омельниченко О. С. Застосування концепції ланцюга цінності як складової системи управління витратами [Електронний ресурс] / О. С. Омельниченко // International Scientific Journal. — 2015. — № 6. — С. 131—135. — Режим доступу : [http://nbuv.gov.ua/UJRN/mnj\\_2015\\_6\\_32.7](http://nbuv.gov.ua/UJRN/mnj_2015_6_32.7).
5. Трансформація вартості у розвитку відносин «підприємство — клієнт» : монографія / А. Чубала, Є. Криківський, Н. Чухрай, Р. Патора, М. Васелевський та ін. — Львів : Вид-во Нац. ун-ту «Львівська політехніка», 2007. — 250 с.

6. Мостенська Т. Л. Роль ланцюга створення цінності у забезпеченні конкурентоспроможності підприємств / Т. Л. Мостенська, О. В. Тур // Вісник Черкаського університету. Економічні науки. — 2018. — № 4. — С. 75—84.
7. Андерсен Б. Бизнес-процессы. Инструменты совершенствования / Б. Андерсен ; пер. с англ. С. В. Ариничева ; науч. ред. Ю. П. Адлер. — Москва : РИА «Стандарты и качество», 2003. — 272 с.
8. Стэйбелл Ч. Б. Конфигурация ценности для конкурентного преимущества: цепочка, мастерская и сеть создания ценности. Управление сложностью. Операционная система бизнеса / Ч. Б. Стэйбелл, О. Д. Фьелдстад ; под ред. С. Хромова-Борисова. — Москва : Изд. дом «Гребенников», 2013. — 340 с.
9. Global Top 100 companies by market capitalisation [Electronic resource] // pwc. — 2019. — July. — Available at : <https://www.pwc.com/gx/en/audit-services/publications/assets/global-top-100-companies-2019.pdf>.
10. Top 10 Strategic Technology Trends for 2020 [Electronic resource] // Gartner. — 2020. — Available at : <https://www.gartner.com/en/doc/432920-top-10-strategic-technology-trends-for-2020>.
11. Яремчук Р. Є. Основні переваги та загрози для комплексного розвитку ІТ-сектору України від реалізації Угоди про асоціацію з ЄС / Р. Є. Яремчук, О. Г. Коломієць // Соціально-економічні проблеми сучасного періоду України. — 2015. — Вип. 5. — С. 68—72.
12. Гаращенко Н. М. Ланцюг формування цінності інформаційного продукту [Електронний ресурс] / Н. М. Гаращенко // Ефективна економіка. — 2014. — № 9. — Режим доступу : [http://nbuv.gov.ua/UJRN/efek\\_2014\\_9\\_50](http://nbuv.gov.ua/UJRN/efek_2014_9_50).  
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Проскурніна Н. В., Горобинська М. В.

### References

1. The microeconomics of industry supply. (n. d.). *faculty.msb.edu*. Retrieved from [http://faculty.msb.edu/homak/homahelpsite/WebHelp%20061813/McKinsey\\_The\\_Business\\_System.pdf](http://faculty.msb.edu/homak/homahelpsite/WebHelp%20061813/McKinsey_The_Business_System.pdf).
2. Porter, M. E. (1985). *Competitive advantage: creating and sustaining superior performance*. New York: Free press.
3. Krykavskiy, Ye., Patora-Vysotska, Z. (2015). Lantsiuh vartosti M. Portera (konstruktsiia, dekonstruktsiia, rekonstruktsiia) ta upravlinnia za tsinnostiamy [M. Porter's value chain (design, deconstruction, reconstruction) and value management]. *Marketynh i menedzhment innovatsii — Marketing and innovation management*, 2, 121—133 [in Ukrainian].
4. Omelnychenko, O. S. (2015). Zastosuvannia kontseptsii lantsiuha tsinnosti yak skladovoi systemy upravlinnia vytratamy [Application of the concept of value chain as a component of the cost management system]. *International Scientific Journal*, 6, 131—135. Retrieved from [http://nbuv.gov.ua/UJRN/mnj\\_2015\\_6\\_32.7](http://nbuv.gov.ua/UJRN/mnj_2015_6_32.7) [in Ukrainian].
5. Chubala, A., Krykavskiy, Ye., Chukhray, N., Patora, R., & Vaselevskiy, M. (et al.). (2007). Transformatsiia vartosti u rozvytku vidnosyn «pidpriemstvo — kliient» [Value Transformation in the Development of Enterprise — Client Relations]. Lviv: Vydvo Nats. un-tu «Lvivska politekhnika» [in Ukrainian].
6. Mostenska, T. L., & Tur, O. V. (2018). Rol lantsiuha stvorennia tsinnosti u zabezpechenni konkurentospromozhnosti pidpriemstv [The role of the value chain in ensuring the competitiveness of enterprises. Economic Sciences Series]. *Visnyk Cherkaskoho universytetu. Ekonomichni nauky — Bulletin of Cherkasy University. Economic sciences*, 4, 75—84 [in Ukrainian].
7. Andersen B. (2003). Biznes-processy. Instrumenty sovershenstvovaniya [Business processes. Improvement tools]. (S. V. Arinicheva, Trans.). Yu. P. Adler (Ed.). Moscow: RIA «Standarty i kachestvo» [in Russian].
8. Stejbell, Ch. B., & F'eldstad, O. D. (2013). Konfiguraciya cennosti dlya konkurentnogo preimushchestva: cepochka, masterskaya i set' sozdaniya cennosti. Upravlenie slozhnost'yu. Operacionnaya sistema biznesa [Value Configuration for Competitive Advantage: Chain, Workshop and Value Creation Network. Complexity management. Business operating system]. S. Hromov-Borisov (Ed.). Moscow: Izdatel'skij dom «Grebennikov» [in Russian].
9. Global Top 100 companies by market capitalisation. (2019, July). *pwc*. Retrieved from <https://www.pwc.com/gx/en/audit-services/publications/assets/global-top-100-companies-2019.pdf>.
10. Top 10 Strategic Technology Trends for 2020. (2020). *Gartner*. Retrieved from <https://www.gartner.com/en/doc/432920-top-10-strategic-technology-trends-for-2020>.
11. Yaremchuk, R. Ye., & Kolomiiets, O. H. (2015). Osnovni perevahy ta zahrozy dlia kompleksnoho rozvytku IT-sektora Ukrainy vid realizatsii Uhody pro asotsiatsiiu z YeS. [Main benefits and threats to the complex development of Ukraine's IT sector from the implementation of the Association Agreement with the EU]. *Sotsialno-ekonomichni problemy suchasnoho periodu Ukrainy — Socio-economic problems of the modern period of Ukraine*, 5, 68—72 [in Ukrainian].
12. Harashchenko, N. M. (2014). Lantsiuh formuvannia tsinnosti informatsiinoho produktu [The value chain of information product formation]. *Efektivna ekonomika — An efficient economy*, 9. Retrieved from [http://nbuv.gov.ua/UJRN/efek\\_2014\\_9\\_50](http://nbuv.gov.ua/UJRN/efek_2014_9_50).

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