

Locus nascendi factors for the economic goods allocation

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Abstract. The paper presents the economic goods allocation depending on their production factors. The feasibility study is made for the existence of four groups and several sub-groups of economic goods, dominated by one “Siamese” pair. The classification of economic goods depending on their place of production factors is made, that will help to improve the quality and efficiency of decision making on the choice of the optimal production placement.

Key words: economic goods’ classification, production factors, possible production placement, investments.

process of creating the right goods is called production. Thus, goods are divided into the gift, (non-economic) that are created by nature (air, water, oil), and economic, resulting from human activities (car, bread, gasoline). In economic theory many approaches are known to the goods classification, but goods have never been classified according to the factors of their locus nascendi (LN) (place of origin, place of birth) [1, 2, 3, 4, 5, 9].

INTRODUCTION

It is known that economic benefit is something that has the property of value, that is capable to satisfy certain human needs directly or indirectly. An example of benefit can be, for instance, car, land, bread, scientific work, performance, software, electrical energy. However, the economic benefit is not only something that can directly satisfy human needs, but also something that can be used to satisfy an indirect need. The founder of the Austrian school of political economy - Carl Menger proposed a classification of goods depending on the possibility of their use for the direct satisfaction of human needs: he divided all goods for the benefit of the first order (this is the benefit that can be used directly for human purposes) and goods of higher order (second, third and so on, which can not be directly used by man) [1]. According to such a division, bread is the benefit of first order, grain from which it is baked – of the second order, grain from which flour is made - of the third order, etc.

Obviously, all goods are derived from the nature, but they need some exposure to activity to become ready for consumption. Even to eat strawberries, you must first gather, to eat nuts they must first be split. However, a person needs a much wider range of goods than nature allows. Because people have learned they need to create goods by influencing the goods existing in nature. The

THE CONCEPT

First of all we formulate some definitions: place of creation of goods (LN), place where non-economic benefit or economic benefit is formed (production), the factors of goods creation in a particular place, the reasons which should be considered in order to predict (forecast) the future LN by answering the question “where?” or explaining the already existing (old) LN by answering the question “why here?”.

The formation of LN factors of goods creation should be performed by considering the properties of places that are favorable for the goods creation. In order to detect a favorable place we should depend on the properties on the “goods” side, that include the following features:

- the production technology (or creation) of goods,
- the resources needed for technologically created goods,
- the pollutants that are formed during the process of benefit creation.

The “goods” side (which are created or are to be created) and side “place” (which is or should be a goods’ LN) are characterized by a certain set of properties, some of which are factors of LN of goods. Factors that determine LN of goods can be divided into internal (which include the features of those “goods” only) and external (the features corresponding to “place”). Thus we have, on the one hand, the properties of the “goods” part, some

of which should be considered as LN factors of goods. On the other hand, the properties of each side of “goods” correspond to the feature of “place”, which should also be considered as an LN factor. LN benefit is characterized by a certain set of properties, some of which are LN factors of goods [9].

First, it is appropriate to comply the general division of goods from their LN factors by separating blessings on those LN which is due to the dominant “Siamese” pair of factors (block A goods general division) and those, LN which is due to several “Siamese” pairs of factors (goods block in general division). In a subsequent study of gift, (non-economic goods) remain unnoticed because the factors driving LN is the subject of geological survey and other sciences of nature and not amenable to optimization in terms of human interests. Therefore, we consider further investigation of the LN factors on economic goods. First, focus on the study of the economic goods of block A, which are divided into 4 groups, and a number of subgroups within these groups.

- Group 1 of economic factors of A block:

Types of goods for which LN is possible. The place with the presence of a suitable resource. The concept of source resource includes not only natural resources (mineral deposits, forests, farmland, clean environment, etc.), but also the resources of anthropogenic origin (e.g. sugar, cement, relatively cheap emission reductions in the region, while ensuring environmental sustainability or low requirements of state to environmental impact). It is clear that extreme volumetric term “resource” potential causes further division types of economic goods group 1 (which includes three subgroups) on LN factors not only within the group but also subgroups.

- Subgroup 1 from group 1 of economic factors, block A:

Types of goods for the production of property “the need for non-mobile resource” is dominant. This subgroup includes kinds of goods for the production of resource extracted from its source (the development of minerals, timber industry, fishing, relatively cheap emission reductions in the region, while ensuring environmental sustainability, etc.) or are immobile resources (such as transportation use of lake energy, use of the river, a clean environment, low requirements to the state of the business impact on the environment). For the types of goods subgroup 1 of group 1 pair of Siamese factors LN is “the need for non-mobile resource” (property side of “good”) - “the existence of non-mobile resource’s source” (property of the side’s place “”).

- Subgroup 2 from group 1 of economic factors, block A:

The types of goods for which the “resource-capacity” feature is high (high cost per unit of the relevant resource) is dominant. Level of resource-capacity characterized by resource-capacity index, calculated as the ratio of raw material to goods supply cost of this (especially when you need to pay duty on export goods), large size (like construction house-building factory), the possibility of

loss of quality (bread, flour, some confectionery, dairy products, thermal energy etc.), security issues (such as sulfuric acid, explosives). For the types of goods subgroup 1 Group 2 pair of Siamese factors LN is “good’s low mobility” (the side feature of “goods”) - “the existence of consumers ‘(the feature of the side - “place”)).

- Subgroup 2 from group 2 of economic factors, block A:

The goods types for which the property “weight (volume) benefit exceeds the weight (volume) of the mining resource” is dominant. It happens, when for the benefit’s production to the basic resource, another freely available resources are added (water and air). Therefore, insulating building materials, which are produced by hot air of raw materials treatment (usually clay), have a strong consumer orientation. It is similar with the beverage industry, brewing, production of refreshment drinks from concentrates, etc., a tangible component of which is water. The world’s largest factory concentrate “Coca-Cola” is located on the island of Puerto Rico. This product is sent to 1,145 companies worldwide which add water to concentrate and pour the legendary drink in various capacities for retail sale. It is drawing attention, however, to the possibility of exceptions in subgroup 2 group 2. For instance, Heineken beer was never produced in the USA, where it has high demand from consumer, since its European origin feature is crucial. For the types of goods sub 2 Group, 2 pair of Siamese factors LN is “weight (volume) benefit exceeds the weight (volume) of the main resource” (the feature of “good” side) - “the existence of consumers” (the property of the side “place”) .

- Subgroup 3 from group 2 of economic factors, block A:

The types of goods for which the “negligible spatial differentiation cost of goods’ production” feature is dominant. Consumer’s targeting this subgroup intention is to save on costs associated with the movement (good to customers or consumers to benefit) in the impossibility to save on production costs. For the types of goods subgroup 3 Group 2 pair of Siamese factors LN is “negligible spatial differentiation expenses birth” (property side of “good”) - “the existence of consumers ‘(the side’s feature’ place”)).

- Subgroup 4 from group 2 of economic factors, block A:

The types of goods for which the “cultural (mental) relation need of employees with consumers benefit” feature is dominant. Therefore, companies that do not require proximity to customers for technical reasons, are oriented on the need of cultural affinity. Thus, companies that deal in European Union retail via phone or Internet, located in Hungary and Bulgaria, where the business costs will be larger than, for example, in India, but at the same time don’t have significant difference in mentality between employees and customers. For the types of goods from sub 4 group of 2 Siamese pair factors LN is a “ the need of mental affinity of employees with benefit consumers” (property side of “good”) - “the existence of consumers” (property side “place”).

- Subgroup 5 from group 2 of economic factors, block A:
The types of goods for which the property “the need of direct contact consumers with employees” is dominant. Direct contact with consumers creates opportunities for rapid response needed to improve the existing goods of producing new wealth, often customized to individual needs. It also facilitates the organization of the service. For the types of goods subgroup 5 Group 2 pair of Siamese factors LN “the need for direct contact in between consumers and workers” (the “good” feature) - “the existence of consumers (the feature for the side “place”).

- Subgroup 6 from group 2 of economic factors, block A:
The goods types for which the property “immobility good” is dominant (eg, good, producing hotels, shops, restaurants, stadiums, etc.). For these types of goods is important to clearly identify consumer goods and estimate the amount of their demand. If the demand for the good in the jurisdiction is not less than the threshold (the level of demand for the good that determines the feasibility of producing this
For example, the resource-capacity index for: oil - 2,5:1; sugar - 7-1; cheese - 9:1; butter - 24:1. Especially demanding are dried mushrooms, fruits and vegetables. For the types of goods from sub 2 Group 1 pair of Siamese factors LN is high “resource-capacity” (the feature of “goods” side) - “sources of resource availability” (the feature of the side “place”). Resource-intensive production orientation kinds of goods conditional desire to save on transport costs.

- Subgroup 3 from group 1 of economic factors, block A:
The types of goods for which the feature of “use of low mobile resource” is dominant. The production of canned food, wine, juices, etc. focus on sourcing as moving under vegetables, fruit, fish, etc. accompanied by a significant loss of quality or costly to prevent this in the way. For the types of goods subgroup 3 Group 1 pair of Siamese factors LN is “use of low mobile resource” (property side of “good”) - “the existence of sources low mobile resource” (property of the parties “place “.
Group 2 of economic factors of A block:
The types of goods for which LN factor is the the market (consumers) proximity. Targeting consumers can be seen across the country, region or city. Group 2 kinds of goods includes six subgroups.

- Subgroup 1 from group 2 of economic factors, block A:
Types of goods for which the property “good’s low mobility” is dominant. Low mobile benefit is difficult to transport a long distance through the cost of this (especially when you need to pay duty on export goods), large size (like construction house-building factory), the possibility of loss of quality (bread, flour, some confectionery, dairy products, thermal energy etc.), security issues (such as sulfuric acid, explosives). For the types of goods subgroup 1 Group 2 pair of Siamese factors LN is “good’s low mobility” (the side feature of “goods”) - “the existence of consumers (the feature of the side - “place”).

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For the types of goods sub 6 Group 2 pair of Siamese factors LN is “immobility good” (the side feature of “good”) - “the existence of consumers” (the side’s feature – “place”).

- Group 3, economic goods, block A:

The goods types for which the feature of “minimal production costs” is dominant. Indicative in this respect is the area of software (the worldwide center of which is India), providing a variety of accounting and consulting services (Poland conducts accounting firms to other European Union countries, including Germany, UK and France), where goods are made with minimal production costs and with help of Internet can be very quickly delivered to customers. Canadian company “Guest-Tek”, which specializes in Internet - services for hotels in Poland opened its European Service Centre, with 200 people stuff. The center provides remote technical support for hotels customers, which serve the Canadian company. The companies, that are belonging to them include the network “Accor”, “Hilton”, “Hyatt”, “Intercontinental” and “Mariott” in the United States, Canada and Western Europe. In the U.S. favorable soil and climate conditions zones are used for growing potatoes and are mainly in the northern states on light soils under irrigation, located at a considerable distance 2,5-4 thousand km. from the main centers of consumption, despite the fact that this crop can be grown in the U.S. in almost all states. This situation is the result of good transportability for potatoes. For the group 3 of producing goods Siamese factors LN is “high transportability good” (property of the parties “production of goods”) - “low cost of production of goods” (property of the parties “place”).

Table 1. The classification of economic benefits of LN that is determined by dominant “Siamese pair” factors

The group of good production	LN dominant factor		Possible LN place, that has:
	The sides of “goods production”	The side «place»	
1	1.1. The use of non mobile recourse	Presence of low mobile resource source	The sources of certain resources
	1.2. High recourse capacity	Presence of resource source	
	1.3. The use of non mobile recourse	Presence of low mobile resource	
2	2.1. Production of low mobile goods	Presence of customers	Customers
	2.2. Weight (volume) of produced benefits exceeding the weight (volume) of the basic resource	Presence of customers	
	2.3. Low spatial differentiation of goods production costs	Presence of customers	
	2.4. The need for customers and employees mental affinity	Presence of customers	
	2.5. The need for direct contact employees and customers	Presence of customers	
	2.6. Low mobility of produced good	Presence of customers	
3	High transportability of produced goods	Low production costs for corresponding goods	The possibility of lowering production costs
4	Danger for the population	The distance from settlements	The distance from settlements

- Group 4, economic goods, block, A:

The goods types for which “the safe distance from major population centers” is dominant. Many types of production goods are dangerous to the environment and population: It is necessary to recall the nuclear accident in Chernobyl, located near Kyiv. The accident at Chernobyl was the worst in nuclear history. It resulted from an erroneous placement of reactor - near densely populated area, close to major cities, reservoirs and rivers that provide these cities. For species producing goods group 6 pair of Siamese factors LN is a “danger to the public” (property of the parties ‘production of goods’) - “remoteness from human settlements” (the feature “place”).

In the Table. 1 is given summary for the classification of economic goods from LN factors, dominated by only one pair of “Siamese” factors. In many cases, the factors of LN goods are several “Siamese pairs”. Indicative in this respect is the requirement of “McDonald’s in Ukraine” (fast food restaurants) to possible LN locations: “McDonald’s will consider proposals for the purchase or long-term land lease for the construction of its facilities in Kiev and other regions of Ukraine. The company is also interested in acquiring or renting commercial premises for containing the catering requirements for land: location - downtown streets and highways crossing heavy traffic and pedestrian flows, congestion places trade and entertainment. Area: 1500-3500 m². requirements areas: location requirements - front side rooms that overlook the downtown streets and highways crossing heavy traffic and pedestrian traffic, subway stations and transport interchanges. Considering also placing in shopping centers - preferred corner room. Area: 350 - 500 m². The minimum ceiling height - 3,5 m, energy supply: 1) power - 150 kW (Power consumption), II category of energy, 2) water and sewerage - 15 cubic meters. per day, 3) heat - 110-115 Gcal or possible arrangement of their own mini-boiler on natural gas.

Another example is the automobile factory in Montgomery (Alabama), which was the first manufacturing investment of “Hyundai Motor” in the United States. The value of investing \$ 1 billion., Capacity - 300 thousand cars annually. The need for labor - 2000 people, including 1600 - production workers and 400 - managers, maintenance and administration of the factory. Concern named key factors for choosing Montgomery for plant placement: skilled labor availability, relatively low labor costs, good infrastructure and convenient road connection to the rest of the country, a very well-developed network of cooperators, generous package of financial incentives and personal involvement of Alabama and Montgomery authorities. Important were also very attractive area parameters (location and geological conditions), and the proximity of modern sea Mobil port. Since Mobil helded components delivery from Korea, and exported finished cars to the markets of South America. Making a decision concerning factories placing, the “Hyundai” management took into account even climatic factors. It is worth noting that one of the reasons for rejection of the Mississippi State Authorities proposal was the fact that the proposed

placement was too close to the “Nissan” plant, which raised fears for the possibility of competition with the Japanese concern for employees. It should also be noted that placing the company in the United States enabled the company to limit the risks associated with currency fluctuations (this factor has limited space analysis of state boundaries USA). And besides, some people noticed that “Hyundai” traditionally has problems with unions, and Alabama State, as, after all, in most southern U.S. states, can be characterized by weak unions not least because of the relevant legislation.

In the Table. 2 the classification of economic goods, which LN is due to several “Siamese pairs” factors. In this table the possibility of providing information about resources is enhanced because both factors of LN goods may be several different resources. The groups of production goods in the block B are formed by various combinations of already established “Siamese” pairs factors. For example, for the goods of B block, group 1 LN factors will be a combination of factors, “the presence of a suitable resource” and “the existence of consumers” (1+2). The existence of a suitable resource automatically generates the possibility of large subgroups, as shown in Figure 1.

Table 2. Classification of economic benefits, whose LN are determined by several “Siamese pair” factors

The “Siamese pair” factors		The types of goods production				
		B ₁	B ₂	...	B _N	
1	1.1	Resource 1.1.1	X	X	...	
		Resource 1.1.2		X	...	
		
		Resource 1.1.Y			...	X
	1.2	Resource 1.2.1			...	
		Resource 1.2.2		X	...	
		
		Resource 1.2.Y			...	
	1.3	Resource 1.3.1			...	
		Resource 1.3.2			...	
		
		Resource 1.3.Y			...	
2	2.1		X	...		
	2.2			...		
	2.3	X		...		
	2.4			...		
	2.5			...		
	2.6			...		
3			...			
4		X	...			

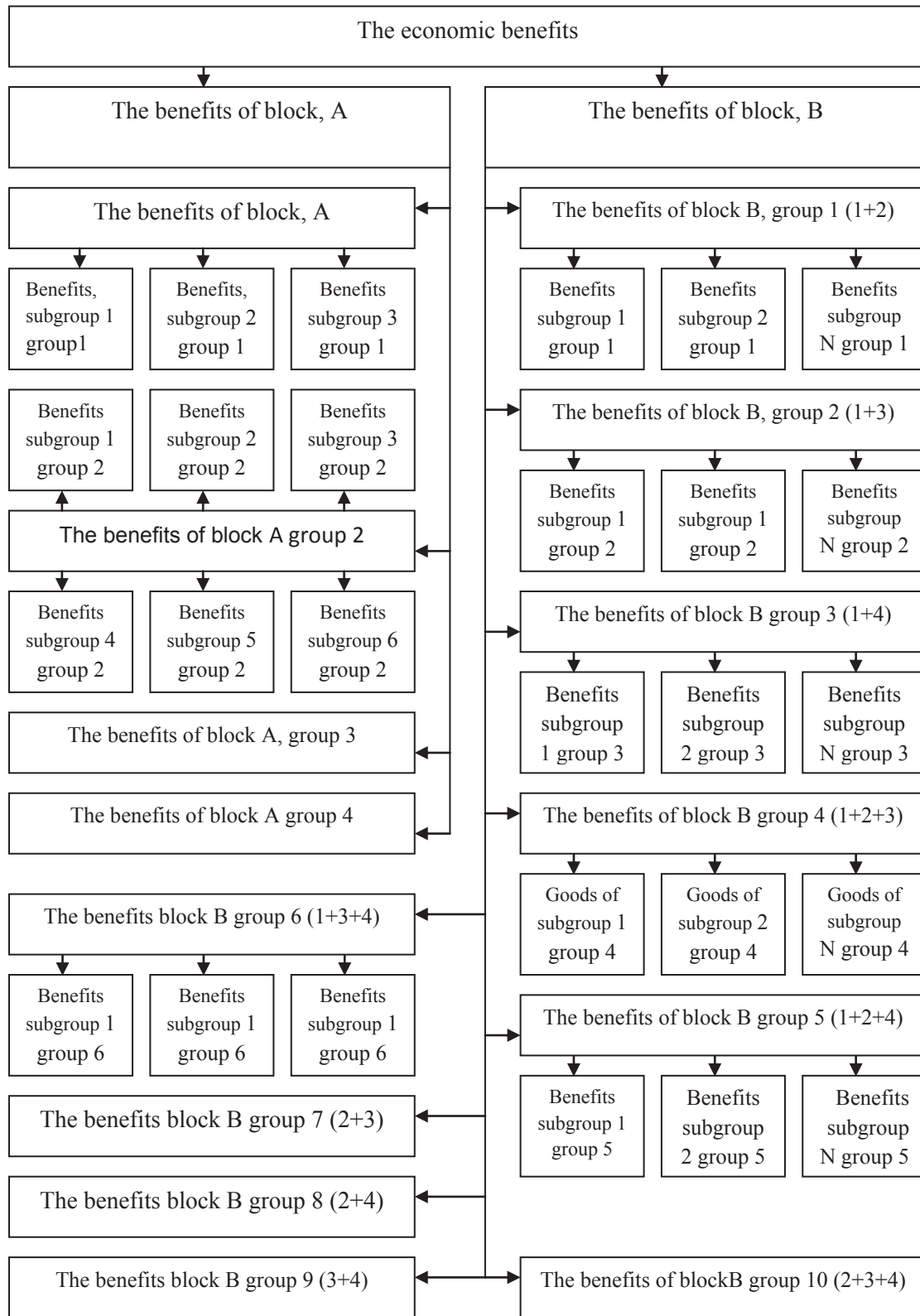


Fig. 1. The economic benefits classification according to their LN factors

It is similar for all goods in B group, where among the LN factors appears «the availability of a suitable resource» factor and any one factor: the good block in group 2 (1 +3) and good block in group 2 (1 +4). After all, there are many subgroups and other goods within a block, where among the factors LN appears factor «presence of

a suitable resource» and a few other factors: good block in group 4 (1+2+3), good block in group 5 (1+2+4) and a good block group 6 (1+3 +4). Good block in the other groups - 7 (2+3), 8 (2+4), 9 (3+4) and 10 (2+3+4) - characterized by the absence of subgroups, as among the factors they LN no factors that generate their necessity.

CONCLUSIONS

The study gives classification of economic goods from their LN factors, that aims at improving the quality and speed of decision making on the location' optimal choice for good's manufacturing. Further studies in this area are promising in the field of identifying more LN factors, their possible economic benefits and filling up developed classification schemes with more specific information.

REFERENCES

1. Criticisms of Classical Political Economy: Menger, Austrian Economics and the German Historical School (Routledge Studies in the History of Economics)/Gilles Campagnolo. – Routledge; First edition, 2010. 440.
2. **Buchanan J. M. 1967.** Public Goods in Theory and Practice: A Note on the Minasian-Samuelson Discussion / Journal of Law and Economics. №10. 193-197.
3. **Green J. and Laffont J.J. 1977.** Characterization of Satisfactory Mechanisms of the Revelation of Preferences for Public Goods / *Econometrica*.-1977. Nr 45(2). 427-438.
4. **Hummel J. R. 1990.** National Goods Versus Public Goods: Defense, Disarmament and Free Riders / *Review of Austrian Economics*. № 4. 88-122.
5. **Jensen R. and Miller N. 2008.** Giffen Behavior and Subsistence Consumption / *American Economic Review*. № 97 (4). 1553–1577.
6. **Samuelson P.A. 1969.** Contrast Between Welfare Conditions for Joint Supply and for Public Goods / *The Review of Economics and Statistics*. № 51(1). 26-30.
7. **Veblen T. 1984.** Theory celebrating class. - Moscow: Progress, 1984. - *** S. Stiglitz Dzh.E. Economics of the public sector: Trans. from English. - K.: Fundamentals. 854.
8. **Chubukova O. and Synenko O. 2010.** The place and role of state in contemporary Ukraine's economics development / *The actual economics problems*. № 8 (110). 79-88.
9. **Creative Industries and Innovation in Europe. 2012.** Concepts, Measures and Comparative Case Studies (Regions and Cities)/ Routledge; 1 edition. 328.