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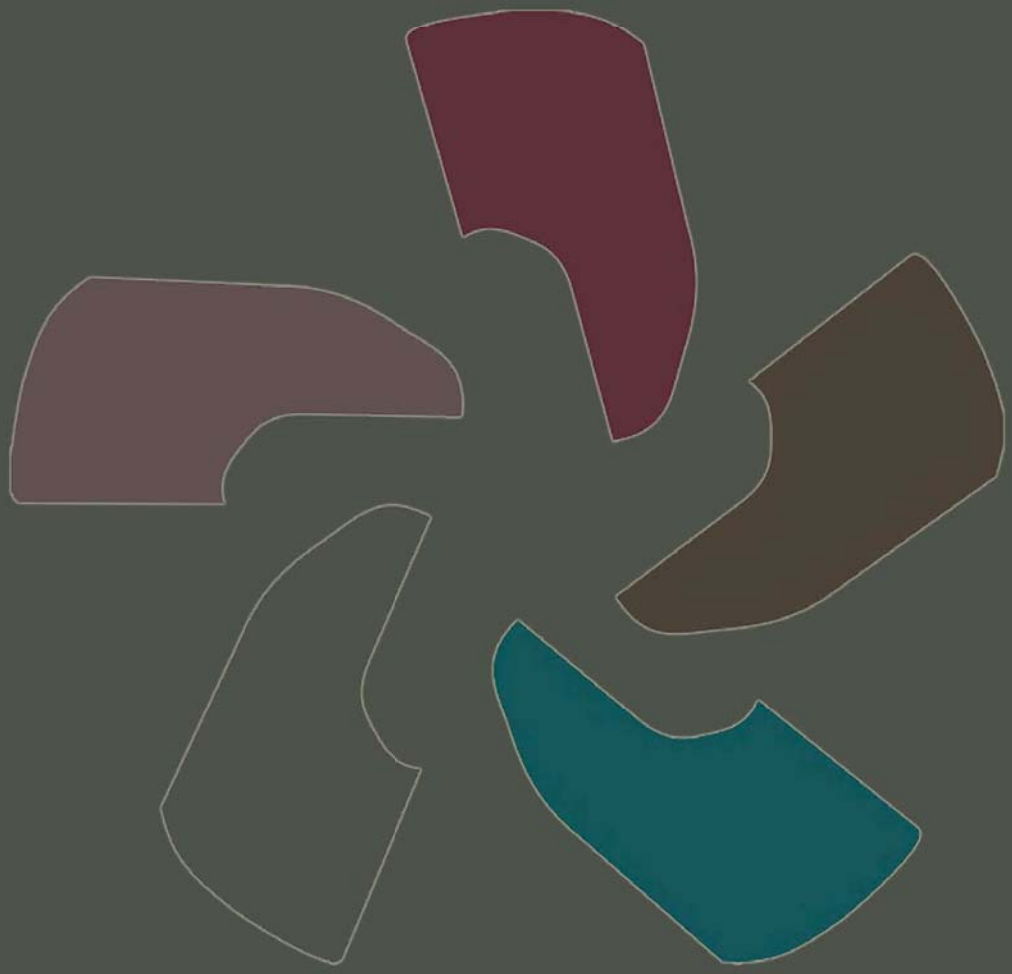

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Contents

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THE MEDIATOR ROLE OF LOGISTIC PERFORMANCE INDEX: A COMPARATIVE STUDY

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Abstract:

Logistics sector is recognized as one of most important element of an advanced economies. Many studies tried to understand the relationship among the logistic sector and the prosperity of a country. We start to understand what is the meaning in the academic literature of logistic so as to better understand the Logistic Performance Index (LPI), published by the World Bank in 2007, 2010, 2012, 2014.

This research through the use of explanatory linear regression model was aimed to analyze the mediator role of Logistic Performance Index (LPI) on the relation between the Global Competitiveness Index (GCI) and Gross Domestic Product (GDP) from 2007 to 2014 in Europe (EU 28).

Keywords:

Logistic; LPI; GDP; Growth; Mediator Effect

1. Introduction:

In 2015 a research of Istanbul Commerce University (Civelek et al. 2015) demonstrate through the use of regression linear model how the Logistics Performance Index (LPI) play a mediator role on the relation between Global Competitiveness Index (GCI) and Gross Domestic Product (GDP).

In that study (Civelek et al. 2015) tested the Mediator variable analysis method suggested by Baron and Kenny (1986) to a global model that covering 96 countries around World, they used World Bank data and took LPI, GCI and GDP data for the years 2007-2010-2012-2014.

Civelek, Uca and Cemberci demonstrated four point:
Logistic Performance Index (LPI) is positively influenced by Global Competitiveness Index; Gross Domestic Product (GDP) is positively influenced by Logistic Performance Index (LPI); Gross Domestic Product (GDP) is positively influenced by Global Competitiveness Index (GCI) and finally the Logistic Performance Index (LPI) has a mediator effect on the relation between Competitiveness Index (CPI) and Gross Domestic Product (GDP).

The mediator model tries to identify and explain the process that underlines a relation between an independent variable and a dependent variable via the inclusion of a third explanatory variable.

To establish the consistency of mediator model Baron and Kenny (1986) recommend three tests: First regressing the mediator on the independent variable; second, regressing the dependent variable on the independent variable and third regressing the dependent variable on both the independent variable and on the mediator.

Baron and Kenny (1986) asserted that the evidence for mediation is strongest when there is an indirect effect but no direct effect, which they call "full mediation." When there are both indirect and direct effects, they call it "partial mediation."

Zhao et al. (2010) starting from Baron and Kenny study identify three patterns consistent with mediation and two with non mediation: Complementary mediation: Mediated effect (a # b) and direct effect (c) both exist and point at the same direction.

Competitive mediation: Mediated effect (a # b) and direct effect (c) both exist and point in opposite directions.

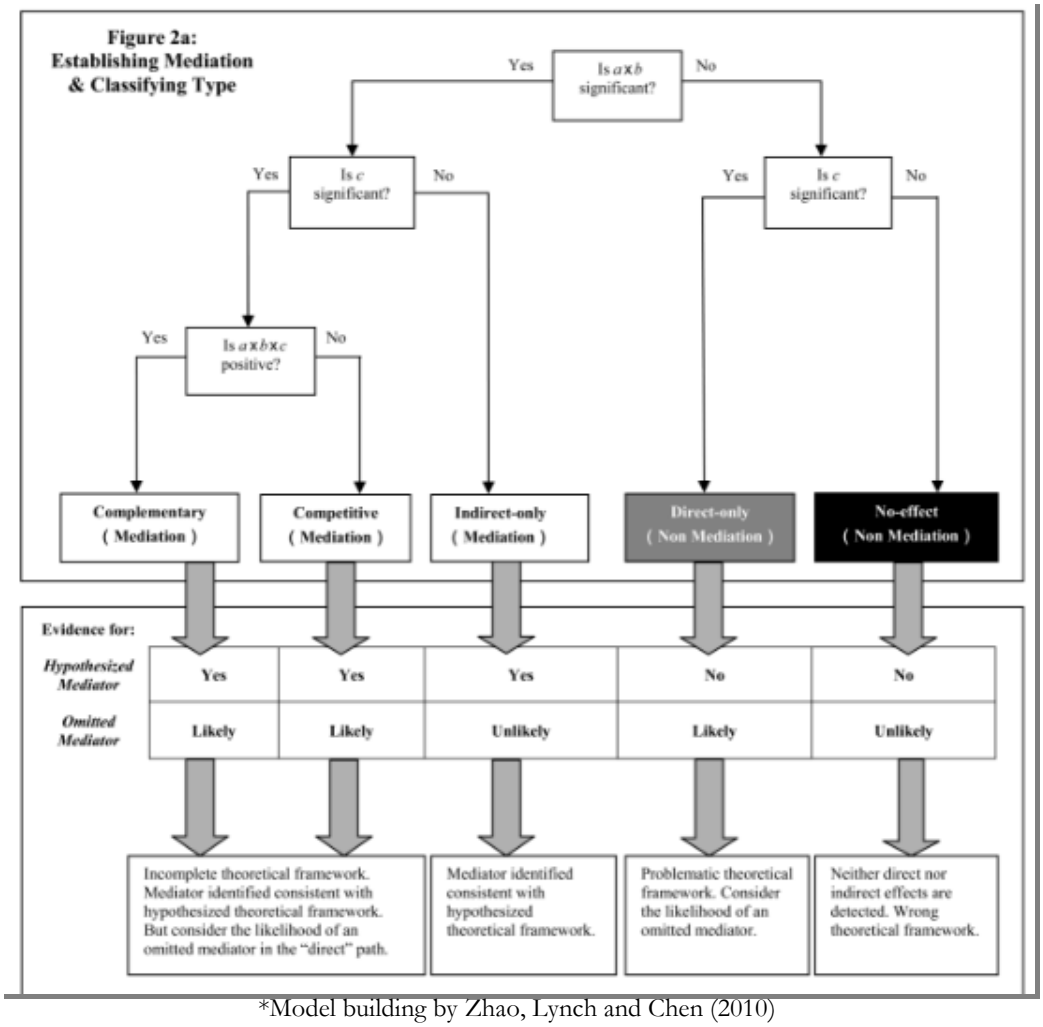
Indirect-only mediation: Mediated effect (a # b) exists, but no direct effect.

Direct-only non mediation: Direct effect (c) exists, but no indirect effect.

No-effect non mediation: Neither direct effect nor indirect effect exists.

2. Conceptual Framework

In 2007 the World Bank has developed a benchmarking tool, based on a index of six indicators, that measure and compare the logistics system performance in to 150 countries. The index allows a country to identify the strengths and weaknesses of its logistics system and partners too, and set actions to improve it. The Countries able to effectively connect to logistics global network have easier access to the markets and this is a key factor for economic development. The index and the indicators are estimated according to a worldwide survey aimed to forwarders and express carriers.



*Model building by Zhao, Lynch and Chen (2010)

The six indicators used by the World bank are:

- *Customs* - transit efficiency from the border (speed, simplicity, predictability, formalities) by border control agencies, including customs.
- *Infrastructure* - quality of trade and transport infrastructure (ports, railways, roads, information and communication technologies).
- *International shipments* - ease of arranging competitively priced shipments.
- *Logistics competence* - logistics services competence and quality.
- *Tracking & Tracing* - Ability track shipments

The Logistics Performance Index and its indicators have been constructed from information gathered in a world-wide survey of the companies responsible for moving goods and facilitating trade around the world—the multinational freight forwarders and the main express carriers. It relies on the experience and knowledge of professionals (Avis et al. 2007).

The idea that the economic success of country depends on its international competitiveness took hold among business, political, and intellectual leaders in the late 1970s. The World Economic Forum which hosts the famous Davos conferences began issuing its annual World Competitiveness Index in 1980, and the ranking became a major criteria to judge a national performance.

The World Economic Forum's annual *Global Competitiveness Report* has studied and benchmarked the many factors underpinning national competitiveness. The Global Competitiveness Report is comprehensive tool that measures the microeconomic and macroeconomic foundations of national competitiveness. They define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. This concept of competitiveness thus involves static and dynamic components are grouped into 12 pillars of competitiveness:

- *Institutions, Infrastructure, Macroeconomic environment, Health and Primary education, Higher education and training, Labor market efficiency, Goods market efficiency, Financial market development, Technological readiness, Market size, Innovation*

it is important to keep in mind that they are not independent: they tend to reinforce each other, and a weakness in one area often has a negative impact in others (World economic forum).

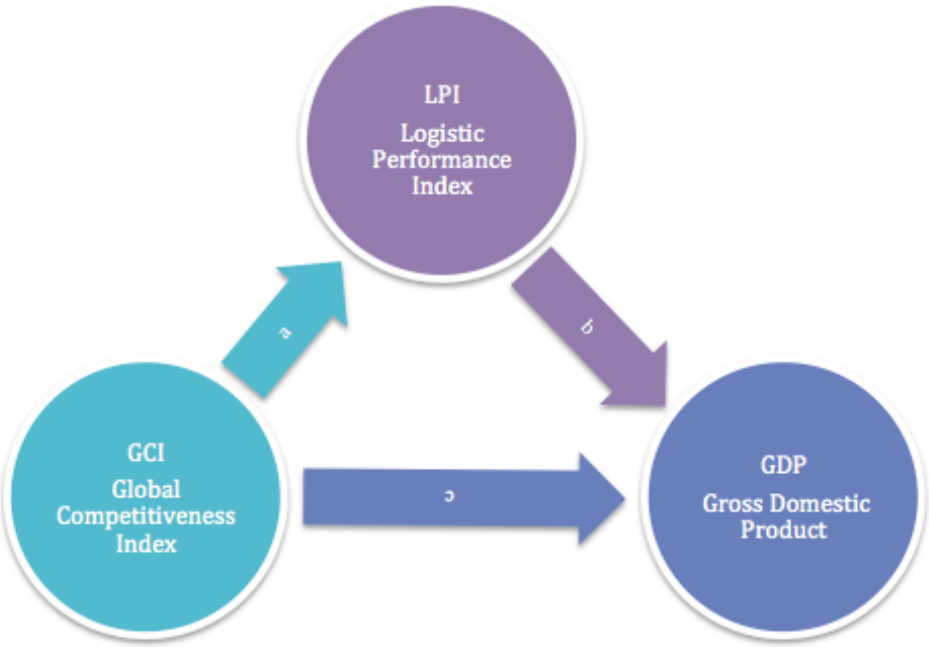
The GDP concept has historically been used to measure human wellbeing and progress. GDP - World Bank data at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. The Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2005 U.S. dollars.

3. Research Model

Main research question is to understand if the study "The Mediator Effect of Logistics Performance Index on the relation between Global Competitiveness Index And Gross Domestic Product" (Civelek, et al. 2015), taking into consideration 96 countries (we called it Global model) it is replicable taking into consideration the 28 European country (EU 28), if exist a mediator effect of LPI on the relation between GCI and GDP.

Figure1. Shows the conceptual model regarding the relation between the tree variable, using the mediator effect model of Baron and Kenny (1986).

Figure 1. Research Model



Consequently to make a proper comparison we accept the four assumptions derived from the research model (Civelek et al. 2015) as show on table one.

Table 1. Summary of Hypothesis

H_1: Logistics Performance Index is positively influenced by Global Competiveness Index.
H_2: Gross Domestic Product is positively influenced by Logistics Performance Index.
H_3: Gross Domestic Product is positively influenced by Global Competiveness Index.
H_4: Logistics Performance Index has mediator effect on the relation between Global Competiveness Index and Gross Domestic Product.

Primarily relation among three variables was observed by means of the calculation of Pearson correlation coefficient. Table 2 showed that the correlation relation among variables are powerful and statistically signaficant.

4. Hierarchical Regression Model

To test the mediator model, we can prove the existence of Baron and Kenny conditions:

1. Change in the independent variable cause the mediator variable change.
2. Change in the mediator variable cause the dependent variable to change.

3. When the mediator and the independent variables are included together, the influence of independent variable on dependent variable to decrease or completely disappear.

The same hierarchical regression of Global model is used:

(a) LPI = β0 +β1 GCI+ε
(b) GDP = β0 +β1 LPI+ε
(c) GDP = β0 +β1 GCI+ε
(c')GDP = β0 +β1 GCI+ β2 LPI+ε

Table 2. Correlation coefficients

		LPI	GCI	GDP
LPI	Pearson Correlation	1	,916*	,576*
	Sig.		,000	,001
GCI	Pearson Correlation	,916*	1	,457*
	Sig.	,000		,015
GDP	Pearson Correlation	,576*	,457*	1
	Sig.	,001	,015	

The results of the regression analysis EU 28 are shown in the Tables 3, 4 and 5.

Table 3. Model summaries (EU 28)

Model	R	R^2	Adjusted R^2	Standard Error of the Estimate
(a)	,916	,838	,832	,16758
(b)	,576	,332	,306	781,18947
(c)	,457	,209	,178	850,11673
(c')	,602	,363	,312	778,00608

As shown in Table 3., difference between R^2 value of Model (c) and R^2 value of Model (c') was found as 0,154.

Table 4. Anova tables (EU 28)

Model		Sum of Squares	df	Mean Square	F	Sig.
(a)	Regression	3,791	1	3,791	134,984	,000
	Residual	,730	26	,028		
	Total	4,521	27			
(b)	Regression	7876123,200	1	7876123,200	12,906	,001
	Residual	15866681,839	26	610256,994		
	Total	23742805,039	27			
(c)	Regression	4952645,435	1	4952645,435	6,853	,015
	Residual	18790159,604	26	722698,446		
	Total	23742805,039	27			
(c')	Regression	8610468,535	2	4305234,267	7,113	,004
	Residual	15132336,504	25	605293,460		
	Total	23742805,039	27			

All the models are generally meaningful as shown in the Table 4. Coefficients of the models are as shown in Table 5.

Table 5. Coefficients (EU 28)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	β		
(a)	Constant	-,084	,308		-,274	,787
	GCI	,754	,065	,916	11,618	,000
(b)	Constant	-3968,558	1283,542		-3,092	,005
	LPI	1319,909	367,404	,576	3,593	,001
(c)	Constant	-3450,905	1560,309		-2,212	,036
	GCI	862,089	329,315	,457	2,618	,015
(c')	Constant	-3262,550	1430,011		-2,281	,031
	GCI	-826,016	749,931	-,438	-1,101	,281
	LPI	2238,226	910,491	,977	2,458	,021

As shown in Table 5, the change in the independent variable cause the mediator variable to change. The change in the mediator variable cause the dependent variable to change. After the mediator and the independent variables are included to the analysis together, the influence of independent variable on dependent variable to decrease.

5. Conclusion:

According to these results, all the hypothesis are accepted. Therefore the mediator effect of Logistics Performance Index on the relation between Global Competiveness Index and Gross Domestic Product is statistically significant. The mediator model proposed in the examined study (Civelek et al.2015) operate with the observations used EU28 model. after the demonstration of the replicability of the work (Civelek et al.2015) we can state that LPI is a good predictor of the GDP performance. This confirms that the improvement of logistics systems of a nation has a positive effect on a wealth. To assess fully this study I invite the researcher to a careful reading of the previous search (Civelek et al.2015).

According to Baron and Kenny (1986) model when there are both indirect and direct effects, there is "partial mediation." According to Zhao et al. (2010) exsist a Complementary mediation: Mediated effect (a # b) and direct effect (c) both exist and point at the same direction. The most important contribution of this study is to test the research (Civelek et al 2015) replicability and the mediator model (Baron, Kenny). The main limitation of the research is only determining if the Baron and Kenny model working, without giving any explanation about the macroeconomic data results.

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CONTEMPORARY ASPECTS OF EUROPEAN TRANSPORT POLICY

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Abstract:

The origin of the common transport policy was in 1957. Currently the Treaty on the Functioning of the European Union (TFEU) of 2007 signed in Lisbon is legally binding concerning the common transport policy of the EU. The dynamic pace of the implementation of the common transport policy the EU was commenced from the beginning of the 1990s' of the last century. The recognition of the importance and the role of transport for the EU as a whole by the Member States has created opportunities for the development of this branch of the economy, which for almost thirty years of the European integration was being marginalized. In contemporary rules about the common transport policy most barriers to its functioning throughout the continent were eliminated. For the EU the Trans-European Transport Networks (TEN-T) importance stems also from the fact that it should contribute to the achievement of greater economic and spatial cohesion of the European Union. The task of the TEN-T network is to increase the technical standardization of individual national networks, improvement of transport infrastructures, access facilitation to infrastructure and fostering better connections between national networks and transport modes. Today we can say without hesitation, that there has been huge progress in the implementation of the common transport policy in the EU. Codification and harmonization of laws at EU level contributes to the development of specific sectors of transport and strengthens European identity in the world.

Keywords:

European Transport Policy; Transport Modes; White Paper; TEN-T; Trans-European Transport Network

1. Introduction:

Transport is an extremely complex sector, in comparison with other service sectors. Basically it is a multiproduct industry, producing differentiated services (both for freight and passengers) by means of different infrastructures (M. Ponti, 2013). One of the primary objectives of the European Union is the establishment of a single transport market and its continuous and sustainable development. It must be pointed out that White Papers issued by the European Commission play an important role in setting directions in the field of transport policy. The last White Paper was released in 2011. It contains the objectives and strategy of EU transport policy to 2050. An important element of the contemporary dimension of the common transport policy of the EU is the trans-European transport network (TEN-T). Its task is to facilitate the access to infrastructure, increasing technical standardisation of individual national networks, improve transport infrastructures and fostering better links between national networks and transport modes.

The purpose of this paper is to show the origins and evolution of transport policy of the European Union and its modern countenance. It is going to be discussed the most important legislative documents concerning individual modes of transport. An important element will be to analyze the modern challenges and threats as well.

2. General Comments on Transport Policy

Transport (Lat. *transportare* - move, carry) is accompanied the human kind from the beginning, since the migrations of people and trade had been developed in antiquity.

The appropriate development of transport in the country is the result of specific economic policy. One of the important elements of the economy of each country is the smooth functioning of transport. Therefore, transport policy plays a significant role in the development of each State.

Transport policy is part of an overall state economic policy, governs the whole matters connected with the various modes of transport, with specific measures and objectives of development that are not limited to the administrative borders of the country. These features are necessary for the existence of a transport policy.

The transport is divided into many branches: land transport (railway, car), inland waterways transport, maritime transport and air transport. The State must conduct such a policy, which will cover branches used on its territory. For example, there is no need to conduct a railway transport policy in a State, where no railways can be found (the Holy See). The State should coordinate the development and operation of transport within individual branches.

In General, the goal of transport policy should be the growth and development of different branches of the transport infrastructures, ensure all service providers equal terms and conditions and fair competition and its functioning based on respect and protection of the environment. Such rules covering the above mentioned aspects are necessary to ensure the technical safety of the rolling stock and the highest level of provided services, in compliance with international standards.

In case of international institutions they can conduct a common transport policy when it becomes the subject of interest of its bodies and when they will issue a variety of decisions in this field (J. Burnewicz, 1991). After World War II, many international and regional organizations were established dealing with issues related to the transport. Nevertheless, conducting a common policy in this area at transnational level was announced in the Treaty on the Functioning of the European Union (TFEU) in 1957, formerly named as Treaty establishing the European Economic Community (TEEC).

3. European Union Policy And Origin Of Common Transportation Policy

The European Union has its roots in the institutionalization of the process of European integration, which was launched at the beginning of the 1950s. of the last century in Western Europe. The turning point for the development of the transport policy was the creation of the former European Economic Community under the Treaty establishing the European Economic Community (EEC), signed in Rome on March, 25th, 1957.

By signing the Treaty establishing the EEC in 1957, it was obvious that relevant provisions for the integration of the transport policy of the Member States must be included, at least for two reasons. First, a great importance was paid to this sector of the economy. Some realized that in long-term it contributes to an increase in the standard of living of the society. Second, the creators of the Treaty were aware that transport enables the functioning of the common market, in particular the free movement of goods and people (W. Januszkiewicz, E. Synowiec, 2004). In has been enshrined in the Treaty of Rome the creation alongside the common agricultural policy, the common commercial policy, the common rules in the field of competition, also the common transport policy.

The term "common policy" means that the European Union can autonomously act in issuing regulations or decisions without having to rely on the harmonization of the national legal systems of the Member States(C. Jung, 1998). However, it is not clearly stated what it would involve, and how it should be shaped. Therefore, it was concluded in the Treaty of Rome the provisions relating to the common transport policy with moderate reservations. The lack of definition when establishing the EEC was due to the nature of the legal provisions underlying the establishment of the community. There was no agreement and political good will to create and transfer to this body, common to all Member States, the powers of the transport policy. Transport markets were strongly controlled by the national authorities and subject to national legal regulations. State authority treated the individual modes of transport, especially aviation, as its national property, which cannot get rid of. In each State there was an individual approach to transport policy.

The provisions of the common transport policy were first modified in 1992, when it was the European Economic Community was transformed into the European Community and the European Union was created on the basis of the Treaty of Maastricht. Further changes to the EC TREATY on the common transport policy were made in the Amsterdam Treaty of 1997 and the Treaty of Nice 2001. Currently the Treaty on the Functioning of the European Union (TFEU) as a modified version of the former EC Treaty of 13 December 2007, signed in Lisbon is legally binding, commonly known as the Treaty of Lisbon (the Treaty entered into force on December 1, 2009.).

4. The Goals And Objectives Of Common Transport Policy

The European Union powers are set out in the Treaty on the Functioning of the European Union (TFEU), in accordance with article 7: *The Union shall ensure consistency between its policies and activities, taking all of its objectives into account and in accordance with the principle of conferral of powers*. Transport in the light of article 4 (2) (a) (g) of the Treaty is a shared competence between the Union and the Member States. However, the detailed provisions of the Treaty in this respect, leave no doubt that it is the common transport policy.

Note: Title VI: Transport; Article 90 TFEU: The objectives of the Treaties shall, in matters governed by this title, be pursued within the framework of a common transport policy.

The dynamic pace of the implementation of the common transport policy the EU was commenced from the beginning of the 1990s' of the last century. The recognition of the importance and the role of transport for the EU as a whole by the Member States has created opportunities for the development of this branch of the economy, which for almost thirty years of the European integration was being marginalized. In contemporary rules about the common transport policy most barriers to its functioning throughout the continent were eliminated. The issue of a large number of legislative acts in different areas, i.e. opening air markets, liberalizing railway and maritime transport, harmonization of aspects of safety, passenger protection, environmental protection and others, results in the actual implementation of the objectives of the common transport policy, initiated in the 1950s.

The provision of article 90 of the TREATY as a general disposition is a clear signal that the transport issue is one of the focus subjects of one of the common policies of the European Union. It has been laid down in the Treaty of Lisbon, the powers of the Union and the Member States in the creation of regulations in this field.

Another article 91 refers to the conditions and the measures to implement by *the European Parliament and the Council shall, acting in accordance with the ordinary legislative procedure, and after consulting the Economic and Social Committee and the Committee of the Regions* in order to implement the common transport policy. These measures are the following:

a) Common rules applicable to international transport to or from the territory of a Member State or passing across the territory of one or more Member States,
b) The conditions under which non-resident carriers may operate transport services within a Member State (i.e. the cabotage),
c) Measures to improve transport safety
d) Any other appropriate provisions.

When introducing these measures by appropriate authorities, the Treaty require to take into account the situation, where their application might seriously affect the standard of living and level of employment in certain regions, as well as on the functioning of the transport infrastructure.

Article 92 states that, u*ntil the provisions referred to in Article 91(1) have been laid down, no Member State may, unless the Council has unanimously adopted a measure granting a derogation, make the various provisions governing the subject on 1 January 1958 or, for acceding States, the date of their accession less favourable in their direct or indirect effect on carriers of other Member States as compared with carriers who are nationals of that State*. This article concerns the free completion protection. All carriers should be treated without discrimination and rules should be clear to all branches of transport.

Article 93 provides for public aid to the transport. In General, any form of public aid, in accordance with article 107 (1) of the TFEU, is incompatible with the internal market and should not be applied. However, article 93 provides for en exception, which reads as follows: *Aids shall be compatible with the Treaties if they meet the needs of coordination of transport or if they represent reimbursement for the discharge of certain obligations inherent in the concept of a public service.* In such case, the public aid should be compatible with article 107 (2) and (3). Many forms of transport activities, in fact, bring loss and must be financed from the State budget or local-government budget, which is why they are considered as public services, or security-related issues.

In a subsequent article 94 a*ny measures taken within the framework of the Treaties in respect of transport rates and conditions shall take account of the economic circumstances of carriers*.

Article 95 (1) contains the prohibition of discrimination of carriers operating in the European Union: *1.* I*n the case of transport within the Union, discrimination which takes the form of carriers charging different rates and imposing different conditions for the carriage of the same goods over the same transport links on grounds of the country of origin or of destination of the goods in question shall be prohibited.* Therefore, in accordance with the provision set forth in paragraph 2 of this Article, t*he Council shall, on a proposal from the Commission and after consulting the European Parliament and the Economic and Social Committee, lay down rules for implementing the provisions of paragraph 1*. In order to control the proper implementation of the above mentioned rules, under the paragraph 4, *the Commission shall investigate any cases of discrimination falling within paragraph 1 and, after consulting any Member State concerned, shall take the necessary decisions within the framework of the rules laid down in accordance with the provisions of paragraph 3*.

In article 96 prohibited imposing by the Member State rates and conditions containing any element of support or protection of one or more companies or individual industries, unless it is authorized by the Commission. This prohibition shall not apply to competition tariffs. Each element of prohibition may by waived by the Commission, which takes all necessary action to examine the rates and conditions and the effects of such rates and conditions on competition between the different modes of transport. After this, the Commission shall take appropriate decision.

Article 97 provides that *charges or dues in respect of the crossing of frontiers which are charged by a carrier in addition to the transport rates shall not exceed a reasonable level after taking the costs actually incurred thereby into account*. Member States are obliged to progressively reduce these costs. In this case, the Commission has significant powers, as it has the right to make recommendations to the Member States on these issues. This is to ensure reasonable prices for transport services and consumer protection in all of the corners of the EU.

Next article 98 refers only to Germany. Such a special treatment of the Federal Republic of Germany is due to the fact that the eastern lands joined in 1990 with the western lands and their economic situation is much worse. Therefore, the Federal Republic of Germany may take any measures to compensate the economic disadvantages caused by the Division of that State. However, the reservation has been made, that after the expiry of five years from the entry into force of the Lisbon Treaty (i.e. after December 1, 2014) the Council, on a proposal from the Commission, may decide to repeal this provision. Until now, this provision was not repealed.

In accordance with article 99 an Advisory Committee consisting of experts designated by the governments of Member States shall be attached to the Commission. The Commission, whenever it considers it desirable, shall consult the Committee on transport matters, without prejudice to the competence of other advisory bodies, for example. Economic And Social Committee. In order to implement this provision, the Directorate-General for Transport was established within the Commission organizational structure.

A special attention should be paid to the provisions of article 100. Apart from the statement in paragraph that t*he provisions of this title shall apply to transport by rail, road and inland waterway*, special focus is on the provisions of paragraph 2, according to which *the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, may lay down appropriate provisions for sea and air transport. They shall act after consulting the Economic and Social Committee and the Committee of the Regions*. Under those provisions, the position of the European Parliament in rule-making of air law has been strengthened and it was also established the obligation of consultations of the proposed rules with advisory bodies, such as Economic and Social Committee and Committee of Regions, which wasn't previously specified. The previous rules of the Treaty of Nice gave the Council exclusive competence to create the European air and maritime law, and the harmonization of these laws, acting by a qualified majority. It is clear that these two branches of transport do not remain outside of the scope of application of the provisions of the Treaty. The Court of Justice of the European Union gave in a 1974 ruling, according to which the provisions of articles 90-99 (previously articles 70-79) apply also to maritime and air transport (Case, 1974).

5. Stages of Development of The Common Transport Policy

Transport policy is based on equal treatment by the Member States of any transport modes as well as carriers, registered in another Member State.

Implementation of the objectives of the common transport policy has stalled at a standstill until the mid-1980s. of the last century, despite many solutions to overcome this "crisis" which aimed at commencing the works on creation of a harmonized dimension. For the Member States of the former EEC it was important the economic integration and common agricultural policy. The issue of the transport policy was marginalised. Since January 1, 1958, in transport policy, the focus was on removing internal barriers at borders between Member States that blocked off the free movement of people and goods.

Despite many initiatives have been proposed every few years, not much have been done in this regard. Until the mid 80. of the last century only a few legal acts were introduced concerning transport. The reasons lie not only in the system of decision-making bodies of the EEC, but also the lack of clearly defined competences of these bodies. It turned out an extremely strong commitment of Member States to shape their own transport policies and their reluctance to transfer those powers to the institutions of the former Community.

A very symbolic year was 1992 for the European Union and for the development of common transport policy. From that time the process of liberalization of transport began as well as the beginning of implementation of rules in common transport policy of the European Union.

The European Union has introduced its plans towards common transport policy in White Books. Until now, there have been three editions: 1992, 2001 and 2011.

5.1. White Paper: 1992

Development plans were set out in the White Paper published by the Commission on 2 December 1992, under the title "The Future Development of the Common Transport Policy – A Global Approach to the Construction of a Community Framework for Sustainable Mobility". It was the first White Paper on transport, which showed the state of the transport system in the newly established European Union and perspectives for its development. The main task, which was set up in the White Paper was the immediate opening of the transport market as fast as possible and autonomy of its development from economic growth. Another goal was to link, also, the needs of the environmental movement.

The White Paper of 1992 by far stressed the importance of road transport, in particular railway transport, and also sea transport. It was about a combination of different transport modes. One of the most important projects to be implemented in the 1990's were *Trans-European Transport Networks* – TENs. This initiative didn't come up first in the White Book, since the Treaty of Maastricht of 1992 contained special provisions in this regard.

The concept of the construction of the trans-European transport network has encountered some difficulties, mainly with funds. Already at the European Council meeting in Essen in December 1994, there were selected fourteen priority projects to be implemented in the framework of the TEN-T's. In the White Paper on Transport of 2001 there have been submitted seven projects, which created a total of twenty-one. In July 1996 the European Parliament and the Council adopted the guidelines for the development of TENs for 2010, which relate both to the infrastructure, traffic management systems and navigation systems.

It should be noted that in the mid-1990s. it was taken into account the fact that the European Union will expand in due time to the East, and therefore, it was necessary to take into account the inclusion in the trans-European transport network also Member States of the region. Therefore, the process TINA (*Transport Infrastrukture Needs Aqssesment*) has been initiated in 1996. The programme of development of transport network until 2025 has been prepared within the framework of this process taking into account the countries of Middle and Eastern Europe. The premise of the TINA process were arrangements of the Transport Conference II in Crete (1994). It was decided to

create a network of ten multi-modal transport corridors to improve infrastructure investments in the Central and Eastern Europe[1]. TINA network consists of ok. 18. km of roads, more than 20,000. km of railway tracks, 38 airports, 13 sea ports and 49 river ports. The cost of the creation of these networks (or building new missing sections of roads or railway lines) in the period up to 2015 was estimated at 90 bln EUR.

The realization of the objectives contained in the White Paper of 1992 proceeded differently in different sectors. Generally, we can positively assess the progress of liberalization of individual transport sectors as well as the growth of Union's legislative acts leading to harmonization of different rules and standards in Member States. The goals set up in 1992 have been generally achieved, except for the railway sector. Taking into account the air transport it was a significant change, while there was a huge advancement in opening of the market to the free competition by liberalizing this sector of air carriers and airports. It resulted in the vast and dynamic growth of air services and introduction of new low cost carriers who entered the market and gained the market previously designed and governed by traditional carriers. Other forms of success in the implementation of common transport policy rules were the release of consumer prices, combined with higher service quality and a wider range of choice.

To serious difficulties in the development of the common transport policy include the following:

- Uneven growth of different means of transport,
- Congestion on the main roads, railway routes and airports as a result of the imbalance between different modes of transport,
- Harmful environmental and health factors and a large number of traffic accidents.

5.2. White Paper: 2001

The elimination of a variety of barriers, as well as shortcomings in the development of the legal framework relating to the common transport policy was described in the second White Paper on Transport, which was published almost ten years later, in 2001, entitled "European transport policy for 2010: time to decide".

An important element, in the context of the implementation of the common transport policy by the European Union, were the relevant provisions of the "Lisbon strategy" adopted by the European Council in March 2000 in Lisbon. It was the ten-year socio-economic programme, which was to make the EU "the most competitive and dynamic economy in the world". In regards of transport policy the main focus was put on air and railway transport. In the field of air transport, the priority was the creation of *Single European Sky* (SES) which was of great importance for the whole Europe and the whole aviation, and an issue of slot allocation at European airports. Special legislative package was introduced in 2004 in this regard, which is often called as the „fourth" liberalization package in aviation. Later, there were two modifications of it: in 2009 (often referred to as SES II) and in 2013 (as SES II plus).

It can be also positively accessed the implementation of legislation in regards of slot allocation, which led to an effective airports' capacity, since the growth in air services led to the „congestion" being more and more unbearable. The Commission proposed further liberalization of air transport in other fields. Taking into account the railway transport, two legislative packages were introduced: one was about to safeguard railway undertakings providing cargo services the greater availability of infrastructure and determining security requirements at railways. The second includes acts to speed up the opening of the market in rail freight, the creation of a European Railway Agency (ERA) and an increase of safety standards (M. Pudlak, 2004).

First of all, it has been analyzed the current state of implementation of goals set in 1992. Huge delays have been noticed in the creation of the trans-European transport networks. There have been proposed solutions involving, i.a., on a better combination of inland waterway routes with rail and sea shipping by sea and river ports, improve passenger transport thanks to the cooperation of airports with high speed railways, and implementation of the intelligent transport systems which will allow to manage network traffic. It has been also announced an extension of

[1] *Transport corridor* is a series of transport routes of international importance, in which there are at least two different transport routes with specific technical parameters and with correctly deployed transport interchange.

the above actions to integrate TEN-T's with European transport corridors that run in most of the Member States, as adopted in 2004. It has been also planned to incorporate sea shipping and inland waterway transport into the transport system of the Union, and their combination would provide competition for road transport (W. Rydzkowski, 2003).

In the White Paper of 2001 there was included many valuable guidelines, which were supposed to assist and stimulate the development of the common transport policy. The new issue was paying an attention to the fact, that all modes of transport need to be treated equally. So far, in fact, there was a practice of promoting of certain sectors, notably railway and road transport. Currently, the main stress is put on the sustainable development of all branches.

However, in comparison with previous development of the common transport policy projects submitted from time to time by the European Commission, a lot of attention for the first time was put on air transport in the White Paper of 2001. This sector was recognized highly significant to the economy and a major source of revenue for companies associated with him.

Despite this, all types of transport are treated equally. You can see this in two aspects. First, the effective competition has been planned to be introduced. In road transport it was announced to strengthen the quality of the implementation of the relevant legal provisions and strengthening of the system of inspections and penalties. It was also planned to modernize and revive the railway transport by optimizing the use of infrastructure and modernization of rolling stock. In case of air transport it was announced the fight against the problem of "air congestion", to analyze airports' capacity and their rational use, paying greater attention to protecting the environment and maintaining the proper level of security.

Second, different means of transport have been connected. It is about the solutions such as:

a) Providing sea – inland waterway – railways transport connections,
b) The launch of the Marco Polo programme designed to help inter-modal transport operators in starting your own business,
c) The creation of a favourable technical conditions, e.g. by standardizing containers.

Moreover, In the White Paper of 2001 it was also mentioned about eliminating. "bottlenecks" in Europe. These were different communication barriers that hamper the development of different transport modes. They remained even though the European Union has adopted an ambitious policy on the trans-European network. In this regard, it was planned to implement large infrastructure projects (i.e. completing the Alpine routes, the strengthening of safety in tunnels) and to take steps towards the creation of a multimodal corridors.

A focus has been put on the rights of passengers. It was diagnosed the causes of hazards on the roads, many dramatic situations occurring at airports related to denied boarding, or a cancellation of flights in last minute and it was announced to strengthen the protection of the rights of passengers. Another element is also to enhance the safety of travelling.

The EU's external relations was an extremely important issue. It was considered that the wider Europe with Eastern European States which were previously under the Soviet political influence must be strengthened in the world arena. To this end it is necessary to speak with a single voice on behalf of the EU as a whole in the different international organizations. Signature and entry into force of the Treaty on the functioning of the European Union in 2009, fills this goal. The white paper also strongly emphasized the role of the single aviation policy and the interaction of the Member States in relations with third countries. It was stipulated in 2001 the take-over of greater responsibility by the council and the Commission for this particular sector and making greater harmonization of rules, which was done in practice in the subsequent years, both in terms of functional and institutional.

5.3. White Paper: 2011

Over the last years it can be noted the progressive implementation of the various programmes and the relevant legislation in the implementation of the common transport policy. Another important message and a plan for the future was the White Paper on transport of 2011(White Paper on Transport, 2011).

Key elements raised in the White Paper are the following:

a) The issue of sustainable transport system in Europe,
b) The development of multimodal transport networks,
c) Environmental performance of transport and reducing greenhouse gas emissions,
d) The application of innovation and technology in the development of transport.

The White Paper provides a vision of a sustainable and resource efficient transport to 2050 with intermediate objectives to 2030. The focus is on the challenges facing transport in Europe in future.

The latest White Paper of 2011 is different from the previous ones. It doesn't focus on the achievements of aviation policy, but it presents deepening cooperation to build a single system of aviation law in Europe, by emphasizing issues such as: the increase in the mobility of passengers, intermodality of transport sectors (air transport linked to railway transport), new technologies of air traffic management, and environmental issues. It was well assesed the idea of implementation of innovative programs of air traffic management (SESAR) that will bring greater capacity at airports, or to reduce the cost of operation of national air navigation centres. Far-reaching strategic objectives have been introduced to implement before 2050. A huge improvement, dynamic changes that have occurred in harmonization of aviation rules in Europe will require continuous monitoring and improvement in those areas where there are deficiencies or if the provisions are not effective.

6. Perspectives and Future of Common Transport Policy

The European Commission introduced a comprehensive strategy of the transport development in 2011 in the next White Paper.

Its purpose is to create a competitive and mobile transport system, which is based on the increased independence of the European Union from imported raw materials used in transport, as well as raising the level of his pro-environmental attitude. The perspective of the European single transport area provides for removal of major barriers to the most important areas of operation of transport through:

- The launch of the base network transport corridors, which operate on the basis of the competitiveness of the different modes of transport (TEN-T network),
- Not less than 30% of the carriage of goods by road for a distance of over 300 km should be moved to the other means of transport by the year 2030, and more than 50% by 2050,
- The combination of all airports' network which are of special interest to the railway network by 2050 (P. Witkowski, 2002).

6.1. Road Transport

The most notable and most common transport service is car transport. When we talk about its role and place in relation to other modes of transport, we have to take into account the size of working time and carriage during the period of at least couple of years (K. Bentkowska-Senator, 2007). In terms of weight carried of goods, car transport is numerous and very significant in the foreign trade. Areas of the continents shall designate a natural space of its application. Taking into account the organizational and economic factors for this particular mode of transport, the most reasonable services are for medium and close distance.
The popularity of road transport takes inter alia the following factors:

- Spacious and wide network of roads,
- Very favourable adjustment of the road network to the location of the cities and production centers,
- Adjusting modes of transport to almost all types of products,

- Operating speed which is fast and effective,
- Short time the carriage due to direct supply (M. Fertsch, 2006).

The number of companies engaged in transport services in European countries shall be assessed on the tens of thousands or more. Road transport is a business for a total of over 500 thousand. companies operating in the European Union. Huge competition and diversity in the field of services provided by road transport undertakings cause a slight level of fixed charges and own expenditures.

The European Union has established common road transport market in the following areas:

a) Rules governing access to the profession and to the market (Regulation (EC) No 1071/2009 of the European Parliament and of the Council of 21 October 2009 establishing common rules concerning the conditions to be complied with to pursue the occupation of road transport operator and repealing Council Directive 96/26/EC**)**. According to the Regulation, operators must fulfill four criteria to access the profession: good repute, financial standing, professional competence, and effective and stable establishment,
b) Minimal standards for working time, driving time and rest periods (including enforcement and the use of tachograph devices) for professional road transport (Directive 2002/15/EC of the European Parliament and of the Council of 11 March 2002 on the organization of the working time of persons performing mobile road transport activities; Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonization of certain social legislation relating to road transport),
c) Minimum annual vehicle taxes for heavy goods vehicles (above 12 tonnes) - Directive 2006/38/EC of the European Parliament and of the Council of 17 May 2006 amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures,
d) Common rules for tolls and user charges for heavy goods vehicles.
e) Harmonization of the maximum weights and dimensions of road vehicles. In order to avoid roads, bridges and tunnels, special rules concerning buses and coaches have been established (Directive (EU) 2015/719 of the European Parliament and of the Council of 29 April 2015 amending Council Directive 96/53/EC laying down for certain road vehicles circulating within the European Union the maximum authorized dimensions in national and international traffic and the maximum authorized weights in international traffic).

6.2. Railway Transport

Until recently, in Europe, it was believed that rail transport serves as a public service, therefore its services should be a common good, and what that supposed to be as cheap and available. State monopolistic railway undertakings as a result showed deficits forcing the State to transfer sometimes huge sums on their restructuring from central budgets. This involved a fairly low rates for services and a very high and fixed costs. In the European Union the key issues was to separate the transport carriage from linear and point infrastructure, which reflected in the organization of rail transport. The adoption of such a model has allowed for the introduction of solutions that rely on the functioning of one company, seeking budgetary resources, responsible for the construction, use and maintenance of point and linear infrastructure, paying for the use of infrastructure, the introduction of competition in the field of providing transport services by rail undertakings, that operate commercially.

The European Union has significantly improved the implementation of common rail policy in recent years. There are three main issues in this regard:

(1) Opening of the rail transport market to competition,
(2) Improving the interoperability and safety of national networks and
(3) Developing rail transport infrastructure

There has been three railway packages liberalizing rail transport. The first package was introduced in 2001. The main principles introduced in this package (three Directives) were:

a) Fair, equal and non-discriminatory access for all train operators licensed in the EU,

b) The granting of licences, allocation of infrastructure capacity and charging of infrastructure fees must be equal to all train operators registered in the EU,
c) Freeways open to cabotage,
d) Freight terminals open for fair, equal and non-discriminatory access to all train, road haulage and waterway operators.

The second liberalization package was developed in 2004. It was further liberalization of rail freight services by fully opening this market to competition as from 1 January 2007. Additionally, it was introduced the establishment of the European Railway Agency situated in Valenciennes (France) under Regulation 881/2004, which was later amended by Regulation No 1335/2008 of 2008.

The third liberalization package was introduced in 2007. It introduced open access rights for international rail passenger services including cabotage from 2010. The third railway package introduced a European driver licence allowing train drivers to circulate on the entire European network as from 2011). The drivers will have to meet basic requirements concerning their educational level, age, physical and mental health, specific knowledge and practical training of driving skills. What's more, this package strengthened the rail passengers' rights under Regulation (EC) No 1371/2007 of the European Parliament and of the Council of 23 October 2007 on rail passengers' rights and obligations (OJ, 2007).

However, the European Commission introduced in 2013 the fourth package, which is still under the process of public consultations.

6.3. Inland Waterways Transport

The European system of international waterways is composed of two subsystems – Western-European and South-European. To the Western subsystem the Rhine river connects together a network of waterways of France, Germany, Switzerland and the Netherlands. The Rhine river until the Basel is available for vessels with a capacity of 2000 tons, and from sea to Duisburg – 3 000 tonnes (S. Koziarski, 2005). In contrast, the Danube creates the backbone of the Southern subsystem connecting Austria, Germany, Hungary, Slovakia, Romania, Yugoslavia, Bulgaria and Ukraine. It is available for the barge of deadweight from 1500-2000 tonnes. These subsystems are connected by the Rhine-Main-Danube Canal with a length of 590 km to form one system. (J. Neider, 2002).

The advantages of inland waterway transport can be a large load capacity of barges and a small impact on the environment. The disadvantages are: low operating speed, the high cost of building and maintaining of artificial linear infrastructure, the navigability of the rivers, the risk of damage to goods that are prone to moisture. There is a large number of shipping companies in inland waterways transport. About 90% of the rolling stock-river barges is owned by the individual owners (P. Witkowski, 2002).

Concerning the inland waterways transport we have the legally binding so-called Integrated European Action Programme for Inland Waterways (referred to as NAIADES. Currently, the modified version NAIADES II which was introduced on September 10, 2013 by the European Commission to strengthen inland waterways transport (Communication from The Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 2013). In 2013 it has been introduced a new programme, PLATINA, which is to support the NAIADES II initiative. The programme runs until 2020 and is to be implemented by the European Commission, the Member States and the industry itself. It has received about € 2 million of funding from the Commission (http://ec.europa.eu/transport/modes/inland/promotion/index_en.htm, 2015).

Inland waterways transport i san alternative for other modes of transport, especially for road and rail transport. It is ecologically friendly in terms of both energy consumption and noise and gas emissions.

6.4. Air Transport

The EU's commitment in the harmonization of the provisions is due to its active role on the international scale in a number of areas, including the participation and creation of European standards. European aviation law is alongside the international rules a separate legal system, although it is an important supplement and compatibility with the regime of the Chicago Convention. An important feature of European aviation law created by the European Union is the fact that the Member States, to which it applies, have limited ability to create national regulations. European legislation is very wide in this regard and regulates all aspects of aviation activity.

European Union's aviation law covers the following issues:

a) Internal market rules (economic aspects of air carriers and airports activity, the role of a State in market regulation concerning public aid, air navigation),
b) Air traffic management (including the creation and implementation of Single European Sky),
c) Air passengers protection (including passengers with reduced mobility, disabled people),
d) Safety and security (including "black list" of dangerous air carriers, protection against unlawful interference and illegal acts aiming at aviation),
e) Environmental protection (issue of aircraft noise and dangerous gas emissions), and
f) External relations with third countries and international multilateral and bilateral cooperation (concluding horizontal and global agreements).

The challenges facing the air transport are related to the implementation of the initiative of the Single European sky (SES) and the solution of the problem of the "air congestion". The priority issue is the air carrier's safety and in this regard the "black list" of dangerous airlines was introduced (European Parliament and of the Council, 2005). All carriers outside Europe which do not meet basic European safety requirements are on the list. In 2015 there are almost 300 air carriers all over the world, the majority of them are from Africa and Eastern Asia. Currently, the air traffic market within the European Union is now totally liberalized. There is a complete freedom of conducting air services. Air carriers registered in one Member State may perform operations in/to the other without special permission (only after notification) in accordance with Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on common rules for the operation of air services in the European Union (OJ L *293, 31.10.2008, pp. 3—20)*. Are carriers registered in Europe (the EU and EEA countries, and Switzerland) must have equal treatment in every State they operate. Airports gained freedom in competition among themselves and their activity is based on free market rules with some exceptions concerning public service obligation.

6.5. Maritime Transport

Seaports are multi-functional and very complex transport points. Sea ports, taking into account foreign trade transaction can be divided into the following:

- Trade and transport seaports that are fully prepared to handle the goods; there is a distinction among them due to the categories of goods e.g.: Gas Terminals, Oil Terminals, universal terminals,
- Fishing ports, which are designed to handle fishing and having necessary accessories for this kind of product (P. Witkowski, 2002).

In maritime transport, the following regulations, inter alia, apply:

- Council Regulation (EEC) No 4055/86 of 22 December 1986 applying the principle of freedom to provide services to maritime transport between Member States and between Member States and third countries, (The Regulation gives shipping companies registered in Member States of the EU the right to carry passengers or goods by sea between any port of a Member State and any port or off-shore installation of another Member State or of a non-EU country. Any national restrictions which reserved the carriage of goods to vessels flying the national flag are removed by this Regulation) (OJ L,1986) ,
- Council Regulation (EEC) No 4057/86 of 22 December 1986 on unfair pricing practices in maritime transport (This Regulation enables the EU to protect shipowners in Member States from unfair pricing practices on the part of non-EU ship-owners. The Regulation gives the definition of the injury that can be taken into consideration, e.g. a reduction in the ship-owners market share or profits or in employment. It allows compensatory duties to be imposed on foreign ship-owners), (OJ L,1986)

- Council Regulation (EEC) No 4058/86 of 22 December 1986 concerning coordinated action to safeguard free access to cargoes in ocean trades (This Regulation applies when action by a non-EU country or by its agents restricts free access to the transport of liner cargoes, bulk cargoes or other cargoes by shipping companies of Member States or by ships registered in a Member State), (OJ L,1986)
- Directive 2010/65/EU of the European Parliament and of The Council of 20 October 2010 on reporting formalities for ships arriving in and/or departing from ports of the Member States and repealing Directive 2002/6/EC (The purpose of this Directive is to simplify and harmonize the administrative procedures applied to maritime transport by making the electronic transmission of information standard and by rationalizing reporting formalities) (European Parliament and of the Council, 2010).

7. The Importance and Development of The European Transport Networks

In the face of increasing economic integration of the European continent the concept of creation and the expansion of the trans-European transport networks (TEN-T), which merge transport systems of Member States of the European Union in one efficient and coherent pan-European system is gaining steadily in importance (E. Kawecka-Wyrzykowska ,2004).

For the EU economy the TEN-T importance stems also from the fact that it should contribute to the achievement of greater economic and spatial cohesion of the European Union.

Taking into account the above mentioned facts, the implementation of Trans-European Transport Networks were the priority issues for the EU in the beginning of the 1990. It is expressed in the inclusion into the TFEU new provisions in this regard titled "Trans-European Transport Networks". The European Union was given the competences and instruments to conduct the policy in this in accordance with the Treaty provision (E. Kawecka-Wyrzykowska, 2004). In order to achieve the goals of the establishment of trans-European Networks, the European Union shall, in accordance with article 171 (1) of the TFEU:

a) Establish a series of guidelines covering the objectives, priorities and broad lines of measures envisaged in the sphere of trans-European networks; these guidelines shall identify projects of common interest
b) Implement any measures that may prove necessary to ensure the interoperability of the networks, in particular in the field of technical standardization
c) Support projects of common interest supported by Member States, which are identified in the framework of the guidelines referred to in the first indent, particularly through feasibility studies, loan guarantees or interest-rate subsidies; the Union may also contribute, through the Cohesion Fund set up pursuant to Article 177, to the financing of specific projects in Member States in the area of transport infrastructure

The task of the TEN-T network is to increase the technical standardization of individual national networks, improvement of transport infrastructures, access facilitation to infrastructure and fostering better connections between national networks and transport modes. The greatest emphasis is put on the need to connect peripheral and island regions with the central regions of the Union.

The key for the development of TEN-T was a decision of the European Parliament and of the Council No 1692/1996 of 23 July 1996 on the EU's guidelines for the development of the trans-European transport network (European Parliament and of the Council, 1996). It will consist of rail network, road network, seaport network, airport network, waterways and combined transport network. It is stated in the Green Paper of 2009, that the comprehensive network comprises altogether: 95 700 km of road links, 106 000 km of railway links (including 32 000 km of high-speed links), 13 000 km of inland waterways, 411 airports and 404 sea ports (TEN-T, 2009).

The European Commission has assigned a budget of the Union for the period 2007-2013 for the financing of TEN-T projects amounting to 8 billion EUR, more than 1 billion EUR per year. This amount is similar in the 2014-2020 financial perspective.

One of the most important priority task is the expansion of the intelligent transport system. As regards intelligent transport systems, TEN-T policy has helped in particular to prepare Galileo and the Single European Sky Air Traffic Management Research (SESAR) − major European projects which, once operational, are expected to make the use of transport infrastructure far more efficient.

In order to ensure proper coordination of the work and the sharing and use of resources, as well as finalize an investment within the time limits, it has been established since January, 1st, 2014, Innovation & Networks Executive Agency (INEA). It is a successor of the former Trans-European Transport Network Executive Agency (TEN-T EA), which was created by the European Commission in 2006 to manage the technical and financial implementation of its TEN-T programme. The INEA main objective is to implement the following EU programmes:

a) Connecting Europe Facility - a key instrument of the EU to promote growth, jobs and competitiveness through targeted infrastructure investment at European level. Is is divided into three sections: CEF Transport, CEF Energy, and CEF Telecom,
b) Horizon 2020 – it is a research programme in the area of ecology and innovation. It consists of two parts: "Smart green and integrated transport", and "Secure, clean and efficient energy". It is expected that INEA will manage a budget of up to €34.1 billion for the new 2014-2020 Programmes
c) Legacy programmes – continuing the implementation of Marco Polo programme and TEN-T.

The European Commission presented in October 2011, a new concept of the TEN-T network, which includes two layers:

- The core network – to be created by 2030
- The comprehensive network – to be created by 2050.

The new core network will remove bottlenecks, upgrade infrastructure and streamline cross border transport operations for passengers and businesses throughout the EU. It will improve connections between different modes of transport and contribute to the EU's climate change objectives. Comprehensive network will ensure the availability to all regions and will cover the whole of the European Union. These two levels of the EU's transport network will include all modes of transport. In plans for the years 2014-2020 it has been assumed the focus of EU funding for core network, promoting the intelligent networks, completing missing trans-border connections and eliminating bottlenecks. It is estimated that the cost of implementing the first financing phase for the core network for 2014 will cost 250 billion. The core network is to be completed by 2030. (Connecting Europe, 2011):

Conclusion

Transport is closely linked to the functioning of the economic development of the region. It was one of the first areas covered by the common policy of the European Union and is the basis for the European integration process. The Union has always sought to create a single European transport area on the principles of fair competition. Transport is an important element of the functioning of the fundamental principles enshrined in the Treaty on the functioning of the European Union, i.e. the freedom of movement of persons, goods and services constitute the basis of the internal market of the Union.

In the original version of the Treaty on the functioning of the European Union of 1957 (referred to as the Treaty establishing the European Economic Community) the provisions for the implementation of the common transport policy have been contained. Decades of inactivity of Community bodies were due to the lack of political will of Member States to liberalize the transport sector. It was a very difficult task for the States to harmonize the rules, that was associated with a reduction in the impact on the shape of their own country's transport policy. During the "cold war" a strong State control was in pursuit of an economic activity, which severely restricted the development abilities of most transport companies. Numerous plans and initiatives published since the 1960s. up to 1980. of the last century included ambitious plans for harmonization of the provisions and pointed to the benefits of the implementation of the common transport policy. However, there was a strong barrier on the side of Member States, who accepted the existing fragmentation of transport systems.

The creation of the European Union in 1992 and the new challenges after the collapse of the cold war system has significantly speeded up the development of the common transport policy.

In the Treaty of Lisbon of 2007 there have been important institutional and organizational changes and it has been agreed a clear division of competences between the Union and the Member States. The common transport policy is now shared competence between the Union and its Member States, which is clearly expressed in article 4 (2) of the TFEU.

The aims and goals of the EU transport policy look sound and consistent (opening up the European market via better transport infrastructure and services) even overcoming strong resistance of vested interests and national egoisms (M. Ponti, 2013). Although, there are still a lot to change and to improve in all sectors of European transport.

Today we can say without hesitation, that there has been huge progress in the implementation of the common transport policy in the EU. Codification and harmonization of laws at EU level contributes to the development of specific sectors of transport and strengthens European identity in the world. The liberalization process of transport markets in Europe should be assessed positively, which strengthens the competitiveness of undertakings and increase quality of service.

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Transport corridor is a series of transport routes of international importance, in which there are at least two different transport routes with specific technical parameters and with correctly deployed transport interchange

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CHALLENGES OF EU SECURITY ON THE EXAMPLE OF CYBETERRORISM POLICY

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Abstract:

In addition to traditional threats to information as spying or leaking state secrets and business secrets appeared the new threats, among which the most dangerous is cyberterrorism. Taking into account the problems of cyber-terrorism, includes, in particular, the analysis of legislation aimed at ensuring the security of information systems of individual countries particular, this subject should be also recognized as requiring at the present time the insightful analysis.

Therefore, this publication is an attempt of characteristics the determinants of this phenomenon and analysis of the latest legal solutions in the fight against cyber terrorism within the European Union.

Moreover, it was made the attempt to find an answer to the question whether the current legal solutions of the European Union in the area of security are an effective tool in the fight against cyberterrorism.

Keywords:

Cyberterrorism; Policy; EU; Challenges

1. The Notion of Cybeterrorism

The definition of cyberterrorism had also given M. Pollite defining it as a deliberate, politically motivated attacks carried out by non-state groups or clandestine agents against information, computer systems, software, and data at the result of what the people not participating in the fighting experience the violence.(Polit, Cyberterrorism- Fact or Fancy?)

The term "cyberterrorism" appeared for the first time in 1979 in Sweden in the report showing computer threats. It covered any activity involving computers, aimed at the destruction of ICT systems, supervisory and control systems, programs, data, etc., and consequently intimidation of the governments and the societies to exert psychological pressure, bringing to life-threatening or result in considerable damage. In the 80s of the twentieth century this term was used in the American special services, pointing to the possibility of carrying out electronic attacks by the enemies of the United States. In 1998, at the Headquarters of the FBI created the National Infrastructure Protection Center (NIPC), whose task is to coordinate the collection of information about the threats, responding to the threats or attacks on critical information elements of the infrastructure of the state.

Defining cyberterrorism as a combination of cyberspace and terrorism means that such activity is associated not only with the hostile use of IT and the action in the virtual sphere, but is also characterized by all constitutive elements for the terrorist activity (Denning, Is Cyber Terror Next?).. This term refers to the unlawful attacks and threats against computers, networks and the information held in them in the aim is to intimidate or coerce the government or its people in order to achieve certain political or social benefits. In addition, in order to qualify an attack as a cyberterrorism attack, it should be made as a result of violence against people or property, or at least cause significant damage in order to induce fear.

It must be stated that the concept of cyberterrorism is used in the context of a politically motivated attack on computers, networks and information systems in order to destroy the infrastructure and intimidating or coercing the government and people of far-reaching political and social objectives in the broad sense of the word (Liedel, 2006, 36). This concept is the object of greater interest for at least of 80 s. of the twentieth century, and the speculations on

this subject have intensified after the attacks of 11 September 2001 in the USA. As a typical threats are indicated the traffic control systems, the bank infrastructure, the energy supply systems and water as well as personal database systems, and government institutions (Pomykała, 2009, 112-113)

The abovementioned definitions show that cyberterrorism is understood in the world in two ways. According to the first concept, the terrorism and cyberterrorism is distinguished only by the use of information technology to carry out the coup, while the second one focuses on computer systems as a target of attacks, and not a tool to carry them out. It seems that the true definition arises only after connecting of both approaches (Suchorzewska A, 2010).

Cybercrime is defined as a form of use of telecommunications networks, computer networks, Internet aimed breach of any good protected by law (Białoskórski, 2009)(Jemioły, 2009)(Kosiński, 2013). Cybercrime differs from the classic crime primarily operating in an environment related to computer technology and the use of computer networks to commit crimes (Siwicki, 2013). Its distinguishing feature is, however, not to protect any one of the common good (Siwicki, 2013). Today, almost every illegal activity is reflected in the Internet. The global nature of the Internet allows extremely fast communication and the transfer of most forms of human activity to the network, too, and these negatively received. Increasingly frequently speaks of cyberspace as a new social space, which reflected the same problems as in the real world. Cybercrime is therefore a modern variant of crime, exploiting the possibilities of digital technology and the environment of computer networks.

This makes that protection against the threats posed by cybercrime is extremely difficult and requires taking a number of projects including challenging multi-faceted and broad international cooperation. The effectiveness of this protection cooperation is essential for individual countries to establish a common policy against cybercrime and its concretization, specifying the priorities and uniform principles of joint action. Thanks to these general rules require implementation into national law of the country, becoming the basis for institutional and functional system of instruments to fight cybercrime. The creation of an effective system to counter cybercrime is not easy, requires a thorough analysis of the phenomenon in the long term, and the creation of such a system may encounter numerous problems in adapting the general guidelines of international law or EU into domestic law.

2. The EU Internal Security Determinants

Religious, demographic, social and ideological issues - apart from military and economic challenges - have become the main factors of crisis in Europe today. Undoubtedly, cultural differences, and especially religion are the main motif of various terrorist groups. Cultural factor can also be a kind of barrier to mutual understanding of the objectives and intentions, the consequence must not be a terrorist attack in the traditional sense. The source of aggravating these tensions may be the fact that the cultural and civilizational diversities are often used as a bargaining chip in the event of a conflict, when in fact the sources of the real reasons for their rivalry are quite different (Snyder, 2003).

Globalization seems to be so advanced that a network of various linkages between countries and societies in the world are too dense to be disintegrated or reduced. The inevitable consequence of globalization is the erosion of state sovereignty, which affects each of the countries, although to various degrees. This is due to "deterritorialization" of social processes and the deepening of various global or international interdependence in every area of social life. This process takes place gradually, but as durable as the globalization affecting in this way to order and international environment.

The processes of globalization, especially affecting the socio-economic sphere, create new security risks. It also has the importance of the fact that part of the crisis-phenomena takes place outside its territory. They directly impact on the internal situation of European countries and the European community. In the opinion of large sections of

communities to maintain security of employment and an adequate number of jobs, the appropriate level of social security and cultural identity should be a priority task of the state1.

To find an answer to the question of what actually a cyber-war is, at the outset it would be necessary to understand why IT networks are increasingly being used by governments? First of all, this is due to specify electronic signal path, and hence the same cyberspace. In cyberspace there are no borders because traditionally understood, although ICT infrastructure is located in specific countries, it is immaterial, but operates on the basis of the actually existing infrastructure, generating an electromagnetic field. Using this feature, you can get tangible material benefits.

With the immateriality of cyberspace other characteristics are related. First of all, the network is global2. As a consequence, the limitations of a physical character do not apply here. It is relatively easy to hide a real identity of the perpetrators of the incidents of ICT. Lack of not only strategic intelligence, but also, in many cases, the possibility of identification of the person responsible for the attack computer. This is, contrary to appearances, the problem of fundamental importance. Identification of the subject responsible for the break-in is in fact essential for the preparation of an appropriate policy response, judicial or military one.

Another important feature of cyberspace are relatively low operating costs there. The development of conventional military capabilities is usually associated with very high financial outlays, including not only the training of personnel, but also the modernization and maintenance of equipment. Meanwhile, the tools that can be used to attack the ICT environment, in this perspective, are almost free3. The use of cyberspace helped by the fact that, as demonstrated operation in 2007 in Orchard the measures of this type can sometimes replace or supplement conventional military operations (Lakomy, 2010). Cyberspace and speed attacks make conducting defense activities difficult. At the same time as indicated above, the offensive actions are relatively cheap and easy to carry. This feature of cyberspace is more pronounced, as there is the greater dependence of societies on its application. The paradox can be noted. On the one hand, the use of ICT in all spheres of human life is associated with momentous benefits, for example, organizational, communication and financial position. At the same time it makes it a technologically advanced body which is much more sensitive to ICT attacks. In addition, as noted by Fred Schreier (Schreier, 2015), ICT space is seen by many as a part of the common heritage of the mankind. In his opinion, an important feature of the ICT is favoring offensive action on the defensive.

The last group of reasons due to which cyberspace has a growing interest in countries associated with the broader sphere of information is ICT space because it has a huge potential from the perspective of propaganda or psychological operations. New information and communication technologies can be effectively used, e.g. to manipulate public opinion or disinformation4.

3. New legislative changes in the counter cyberterrorism policy of the European Union

The latest Directive 2014/41/EU of the European Parliament and of the Council of 3rd April 2014(JOL EU L 130 on 1.05.2014). concerning the European Investigation Order (EIO) in criminal matters art. 1 paragraph 1 of the directive defines the broader concept of EIO than that which was contained in the Framework Decision

[1] Theoretically, one person could potentially make detriment, which in fact can be the result of the activities of organized terrorist groups or military units.

[2] It can wipe actors distant from each other by thousands of kilometers. Space ICT facilitated this practice both state and non-state entities. Now, from the other end of the globe, with a relatively low risk of incurring the consequences it can be almost instantly obtain relevant data, including, for example, document and technology of fundamental importance for national security.

[3] State relatively easily may come into possession of malware (viruses, Trojans, worms), as well as the equipment needed to carry out even advanced operations. Increasingly, government agencies themselves are developing the most powerful tools. However they do not involve the major costs in terms of budget (the case of the Stuxnet virus).

[4] An interesting manifestation of such measures was Russian cyber-attacks on Estonia and Georgia in 2007-2008. In both cases, limiting opportunities for active information policy for these countries, helped to strengthen the position of the Russian Federation in the international arena.

2008/978/JHA. In the current wording it means a judicial decision issued or approved by a judicial authority5 "the issuing State"6 to call "the executing State"7 to carry out one or several specific investigative order to obtain evidence.

The directive shall apply from 21st May 2014 to 22nd May 2017. Member States shall take the necessary measures to meet its requirements. It replaces the existing so far rules ratified by Poland of the European Convention on Mutual Assistance in Criminal Matters of 1959 and the Convention on Mutual Assistance in Criminal Matters between the Member States of the European Union in 2000. As well as the Council Framework Decision 2003/577/JHA the execution in the European Union of orders freezing property or evidence and the Framework Decision 2008/978 / JHA on the European evidence Warrant (JOL EU L 350, 30.12.2008).

The EIO is like the EAW of 2008 another instrument based on the principle of mutual recognition. Thus, facilitating cooperation between EU Member States, excluding the double criminality requirement in the list of crimes, including terrorism. Moreover, the procedure of their application is simple, steps are taken directly by the judicial authorities. However, the European Evidence Warrant in 2008 is often rated as an useless instrument because it requires certainty as to the presence of evidence in the requested State (*Catelan*, *Cimamonti*, *Perrier,* ,2014, 135) In connection with this new instrument or EIO, which was created, it covers almost all investigative and does not have this requirement. These instruments are crucial in the fight against the use of the Internet for terrorist purposes, because they allow rapid international cooperation.

The EIO mechanism was created to enable the courts, prosecutors and other investigative authorities for a direct transmission of requests for specific proof, secure and search the property or hearing by videoconference. The judicial authority of the country, to which EIO was directed, has limited grounds for refusal of enforcement of such a request (e.g. due to national security concerns) and strict deadlines for its implementation. As a general rule it has seen European orders in the same way as those issued by national authorities.

According to article 3 of the objective range of the EIO governing each investigative action beyond creation of a joint investigation team and the gathering of evidence within such a team investigation, as provided for in art. 13 of the Convention on Mutual Assistance in Criminal Matters between the Member States of the European Union and the Council Framework Decision 2002/465/JHA unless these actions are being taken to implement Article 13 paragraph 8 of the Convention and Article 1, section 8 of the Framework Decision 2002/465 / JHA (JOL L 138, 4.6.2009).

Therefore, in accordance with art. 4 EIO directive may be issued:

a) With respect to criminal proceedings, which initiated a judicial authority or which may be brought before the judicial authority in the case of an offense under the law of the issuing State;
b) In proceedings brought by the authorities in respect of acts threatened with punishment under the national law of the issuing State, as they represent a violation of the law, and the decision may give rise to proceedings before a court having jurisdiction in particular in criminal matters
c) In proceedings brought by judicial authorities in respect of acts which are punishable under the national law of the issuing State, they constitute a breach of law, where the decision may give rise to proceedings before a court having jurisdiction in particular in criminal matters; and
d) In connection with proceedings referred to in point a), b) and c) which relate to offenses or infringements for which a legal person may be held liable or punished in the issuing state.

[5] In contrast, the executing authority is the authority competent to recognize an EIO and ensure its execution in accordance with this Directive and with the procedures applicable in similar domestic cases.
[6] This means the Member State in which the EIO is issued (Art. 2 paragraph 1 item a).
[7] This means the EIO executing Member State in which you want to perform a particular investigative measure (Art. 2 paragraph. 1 item b).

In addition, the issuing authority in accordance with art. 6 EIO of this Directive may do so only if the following conditions are met:

a) Issuing the EEW is necessary and proportionate to the purpose of the procedure referred to in Article 4, taking into account the rights of the suspect or the accused; and
b) In a similar national case management to carry out the investigative measure(s) indicated in the EIO is permissible under the same conditions

However, when the executing authority has reasons to believe that the conditions referred to in art. 6, paragraph 1, have not been met, it may consult with the issuing authority on the so-called EIO why they were taken. After such consultation, the issuing authority may also decide to withdraw EIO.

4. Conclusion

The fact is that modern information systems which form part of the critical infrastructure of the country require a much more solid protection than it seemed a few years ago. The effect of rapid technological development has become a strong dependence of the economy on IT systems. They control nowadays telecommunications, banking, energy supply, the air traffic system, a network of trains, control water supply and sewage disposal. We could say that the modern economy would cease to function without them.

The need for security seems to be a self-evident truth. Some companies are aware of this fact, others unfortunately not. Certainly protection systems can be improved through the introduction of new legislation providing good practices in the area of security. However we must remember to set new rules balance the need for security with the right to privacy (Oleksiewicz, HSS, vol. XIX, 21 (1/2014), 113-130).

All these features make that cyberspace is increasingly becoming a target of the country. Some of them already since the 90s of the twentieth century develop its potential in this field. One can understand not only employed professionals and their infrastructures, but also the techniques and tools used in ICT attacks. Rightly it recognized that in its present form Cyberspace can be effectively applied to meet specific interests in the international environment.

Another regulation EIO introduced is a simplified and harmonized legal framework for cooperation in the collection of evidence for transnational criminal proceedings or investigations. Cooperation between the European Union and the Member States in the field of information security assurance is not easy due to the large number of systems and various initiatives undertaken in this area. However, it should be clear that this cooperation is developing very quickly. It seems that depending on the specific sector, its effects will be seen in the near future.

Another important aspect of this case is education. All the time insufficient number of computer users are unaware that their computers may be targeted by teenage hacker or be used as a remote weapons by terrorists. Conducting awareness, but lacking the alarming tone of the educational campaign would certainly help improve safety in this area.

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A MARKETING APPROACH TOWARDS THE SUFFICIENCY OF READY-MADE GARMENTS TO SATISFY THE NEEDS OF CHILDREN WITH AUTISM

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Abstract:

Autism is a term of which we have been aware recently in our country through visual and printed media and which we have seen examples around us. Together with opening Dependent and Independent Education Centres for Children with Autism, children with autism have found the opportunity to receive education in line with their needs. With individual education programs developed by the teacher suitable for the development of the child with autism, they can acquire skills in various development areas. Dressing skill, which is one of the main skills necessary for every individual, is a mandatory skill that children with autism need to acquire to satisfy their own needs. In the first three parts of the study a conceptual frame was given and the definition, history, types, characteristics, and behaviour problems of children with autism were presented, and clothing comfort and other concepts were explained. In the fourth part, method, material, research approach, sample and population, numerals, limitations, data collection technique and data analysis technique were explained and the results were presented in tables. The study was carried out to reveal dressing problems children with autism encounter and to determine to what extent the clothes made by ready-made clothing sector satisfy the needs of children with autism and it was found that children with autism have difficulties in using ready-made clothes.

Keywords:

Autism; Dressing Problems; Ready-Made Garments; Marketing

1. Introduction

Autism generally appears during the first years of a person's life. It manifests itself in breakdowns in social interaction and verbal communication and continues through life (Luleci, 2011). One of the main reasons why autism has been the centre of attention recently is the fact that it has been recognized well and the frequency of it has increased. (Aydin, 2003). Normal children are born in a way to have a number of skills regarding each field of development whereas children with autism have many inadequacies which are related to holding an object with hands, toddling, eating, talking, understanding the mimics, and mimicking skills (Darica et al, 2002). Since dressing is a complicated process, it may take months to teach a child to get dresses on her/his own if the child has a learning difficulty. It is important that children with learning difficulties gain dressing skills, use these skills, and reach the level of normal children, which in turn will help children with autism to carry out their lives and use dressing skills independently. Gaining this skill is a significant gain both for the family and the child (Soganci, 2011). During this process it is necessary to avoid clothes that the child may not wear easily and that have a complicated structure. The aim of this study is to identify the dressing problems of children with autism and to determine to what extent ready-made garments are suitable for these children. The study was planned and conducted to reveal the problems children with autism encounter in terms of dressing. For this purpose, to what extent ready-made garments satisfy the needs of children with autism, the features of clothes they might use and how appropriate zipping aids are were investigated.

2. Autism and Child With Autism

Autism is disability appears within the first three years of life and continues through the life (Korkmaz, 2000). There are both individual differences and similarities among children with autism. These children have problems regarding social interaction, verbal and non-verbal communication and imagination and show limited/repeated behaviours and interests (Besler, 2015). Although its symptoms and severity generally decrease, it continues for a life time. The

severity of the situation and the way problematic behaviours accumulate differ by every child (Kayaalp, 2000). The individual with autism perceives everything including the self as an object (good). That is, there is no integrity in her/his life. For this reason, the world seems like a puzzle of which pieces are never put together. The child cannot see any integrity. For example, when looking at a forest, she/he sees only one tree; thus, the forest is composed of only the tree she/he sees (mebk12.meb.gov.tr/meb_iys_dosyalar/06/14/.../11100534_otzm.doc.)

2.1. Types of Autism

Asperger Syndrome: Asperger syndrome is different from other types in that there are not language development problems. It is a milder form autistic syndrome than other autism types(http://www.otizmvakfi.org.tr). Pedantry and specific problems in manipulative skills are typical. These children have normal or superior intelligence and behavioural problems. Gestures, mimics, and use of body language are problematic (Korkmaz, 2000).

Childhood Disintegrative Disorder: Children with this disorder develop normally at least two years after birth. The disintegration becomes evident with increasing activities, unrest, anxiety and losing previously-gained skills (talking etc.). Severe mental disability appears in childhood disintegrative disorder (Dogan, 2013).

Rett Syndrome: Rett syndrome begins between the 6th and 18th months and affects almost only girls. With this genetic syndrome, all mental, social, communicative and kinetic skills regress and balance disorders appear (http://www.otizmvakfi.org.tr). It is a serious psycho-motor development regression in which the head is smaller compared to the body and hand movements disappear (Volkmar 2007).

Atypical Syndrome: Atypical syndrome is diagnosed in patients who have some symptoms of autism or Asperger syndrome (http://www.otizmvakfi.org.tr)

2.2. Behavioural Problems of Children with Autism

Temper tantrums: Temper tantrums generally become evident in age periods of 2 and 5. Talking is limited or absent and thus the child cannot express herself/himself verbally. For this reason, behaviours called temper tantrums such as kicking, crying, shouting, and throwing herself/himself on the floor emerge. Behaviours Damaging the Environment: Screaming outdoors, damaging the items in the house.

Self-harming Behaviours: These behaviours generally appear when the child gets angry, anxious, or unsuccessful. For example, pulling hair, scratching face, biting hands etc. Among severe behaviours are hitting the head on the wall, biting the hands until they bleed. Stereotypical (Repetitive Series of Body Movements) Body Movements:

- Sensory Stimulation: Swinging back and forth, swivelling.
- Visual Stimulation: Moving the fingers in front of the eyes, making figures with the fingers.
- Tactual Stimulation: Touching the ears, hands with with the rhythmic movements of the hand.
- Auditory Stimulation: Verbigration. (İlik, 2006).

3. Clothing Comfort

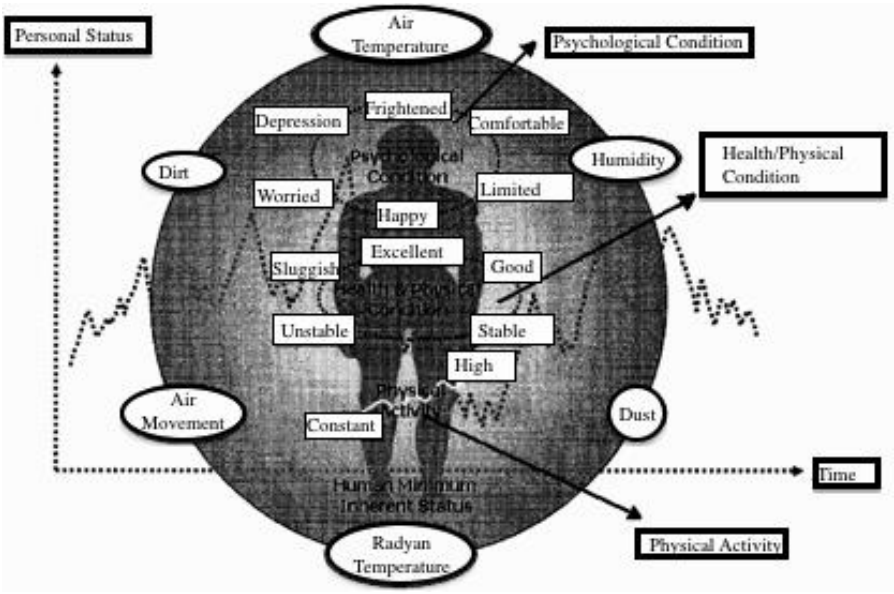
In some sources clothing comfort is defined as a neutral situation independent of pain and discomfort, psychological and physiological harmony between human being and environment, not feeling uncomfortable or unsatisfied in any garment, satisfying harmony between human being and environment (Oner and Okur, Years:17). Clothing has personal, physical, mental, and social effects on children. The child learns how to dress tastefully and in a well-matched way from the adults and it is possible to help the child to get dressed by asking for her/his opinion. However, the most evident feature of autism is that children with autism are not able to express what they want to wear because of not being able to communicate and this situation emphasizes the importance of clothing in terms of the child socializing and feeling worthy (Soganci, 2011).

3.1. Basic Elements of Clothing Comfort

Clothing comfort is composed of two basic elements, namely psychological and physiological. Physiological comfort included thermo-physiological (thermal or calorific) comfort, sensorial comfort and body movement comfort.

Psychological comfort is usually named aesthetic comfort. Aesthetic comfort is perceived the clothing features that affect the person's psychology via sensory organs (eyes, ears, skin etc.) (Li, 2001; Kaplan and Okur, 2006).

Figure1. Basic Factors affecting clothing comfort (Okur et al, 2008)



4. Research Methodology

4.1. Method and Findings

This study which aimed to identify clothing problems of children with autism was carried out using school survey method. A questionnaire was prepared for parents or coordinator teacher and administered.

4.2. Population and Sample

The population of the study was composed of children with autism studying in Education Centres for Children with Autism (ECCWA) in Istanbul in accordance with the rule "in order to generalise the study to a certain population, the study is done on small sample groups according to random sampling" as pointed out by Karasar (2001).The sample of the study was composed of 60 individuals with autism (aged between 3 and 16) studying in ministerial ECCWAs in Istanbul

4.3. Premises

The answers to the questionnaire questions are correct. The information found in the literature is correct. The sample group involved in the study represents the population.

4.4. Limitations

The subject of the study is limited to Identifying Clothing Problems of Children with Autism and Making Design regarding the Solutions. The study is limited to ECCWAs in Istanbul. The study was carried out between September 2014 and June 2015.

4.5. Data Collection Technique

The literature of the study was created by reviewing various books, journals, periodicals, and online reviews. The questionnaire form developed by the researcher was used to collect research data.

4.6. Data Analysis Technique

While the data was entered into the computer, teacher and family variables were coded. Following the coding process, data analyses was done using SPSS package program. The findings regarding general information, questions prepared for the parents, behavioural characteristics of the child with autism, clothing skills, general skills, and zipping aids were shown in Percentage-Frequency tables.

5. Findings

5.1. General Information regarding Children with Autism

This section includes sex, age, height, weight, duration of education and general behaviour characteristics of the children.

Table 1. Distribution of Demographic Values regarding the Children with Autism

Sex	**Frequency**	**Percentage**	**Valid**	**Cumulative**
Girl	13	21,7	21,7	21,7
Boy	47	78,3	78,3	100,0
TOTAL	60	100,0	100,0	
Date of Birth				
1999-2002	5	8,33	8,33	8,33
2003-2007	18	30,0	30,0	38,33
2008-2012	37	61,67	61,67	100,0
TOTAL	60	100,0	100,0	
Height				
90-120	22	36,67	36,67	36,67
121-150	24	40,0	40,0	76,67
151-190	14	23,3	23,3	100,0
TOTAL	60	100,0	100,0	
Weight				
12-25	29	48,33	48,33	48,33
26-40	15	25,0	25,0	73,33
41-60	7	11,67	11,67	85,00
61-80	9	15,0	15,0	100,0
TOTAL	60	100,0	100,0	

According to Table 1, 21,7% of the children were girls and 78,3% of them were boys. The children in the group were aged between 3 and 16. 8,33% of the children were born between 1999 and 2002, 30% of them were born between 2003 and 2007, and 61,67 were born between 2008 and 2012. Height of the children participated in the study varied between 90 cm and 187 cm. 36,67% of the children were 90 -120 cm tall, %40 of them were 121-150 cm tall and 23,3% of them were 151-190 cm. The children participated in the study weighed between 12-80 kg. 48,33% of them weighed between 12 and 25 kg, 25% of them weighed between 26 and 40 kg, 11,67% of them weighed between 41 and 60 and 15% of them weighed between 61 kg and 80 kg.

Table 2. Distribution of Values regarding Duration of Education in any Education Institution of Children with Autism

Duration of Education	Frequency	Percentage	Valid	Cumulative
Up to 1 Year	6	10,0	10,0	10,0
1-3 years	24	40,0	40,0	50,0
4-8 years	23	38,33	38,33	88,33
9 years and more	7	11,67	11,67	100,0
TOTAL	60	100,0	100,0	

As it is seen in Table 2, 10% of the children with autism were educated for 1 year or less, 40% of them were educated between 1 and 3 years, 38, 33% of them were educated between 4 and 8 years, and 11, 67% of them were educated for more than 9 years.

Table 3. Distribution of Values regarding the Number of Disabled Members in the Families of Children with Autism

Disability Status within the Family	Frequency	Percentage	Valid	Cumulative
Yes	0	0,0	0,0	0,0
No	60	100,0	100,0	100,0
TOTAL	60	100,0	100,0	

The data in Table 3 show that there was no other individual with any kind of disability in the families of children with autism.

Table 4. Distribution of Values regarding Clothes Buying Choices of Families of Children with Autism

Clothes Buying Choices of Families for Children with Autism	YES		NO		TOTAL	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
If a well-known brand had special clothes designed for children with autism, I would buy them.	26	43,3	34	56,7	60	100,0
If there were a brand designing special clothes for children with autism, I would buy them.	21	35,0	39	65,0	60	100,0
If there were websites selling clothes for children with autism, I would buy them.	11	18,3	49	81,7	60	100,0

The answers given by the parents are shown in Table 4 indicate that 43, 3% of the parents would buy the products of famous brands if they had special clothes designed for children with autism and 56, 7% of them would not buy

them. 35% of the parents stated that they would do shopping from these brands if there were a brand designing special clothes for children with autism whereas 65% would not want to buy clothes of these brands. 18,3% of the parents stated that they would do online shopping if there were websites selling clothes for children with autism while 81,7% of them would not like to do online shopping.

5.2. General Behavioural Characteristics of Children with Autism

Table 5. The Distribution regarding General Behaviours of Children with Autism.

Behavioural Characteristics	YES		NO		TOTAL	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Has temper tantrums.	60	100,0	0	0,0	60	100,0
Tends to undress during temper tantrums.	6	10,0	54	90,0	60	100,0
Tends to rip the clothes or part of the clothes during temper tantrums	12	20,0	48	80,0	60	100,0
Dirties the clothes during eating.	31	51,7	29	48,3	60	100,0
Wipes hands on clothes after eating.	16	26,7	44	73,3	60	100,0

The data presented in Table 5 show that 100% of the children with autism had temper tantrums. 10% of the children took off their children during temper tantrums and 90% of them did not have such a tendency. 20% of the children had a tendency to rip their clothes during temper tantrums but 80% of them did not show this behaviour. Almost half of the children dirty their clothes while eating whereas the other half does not dirty their clothes. According to the answers given by the parents and the teachers, 26, 7% wipes their hands on clothes after eating and 73% did not wipe their hands on their clothes.

5.3. State of Children with Autism regarding Dressing Skills

This part shows the distribution of dressing skills and skills regarding zipping aids

Table 6: Distribution of Values regarding Dressing Skills of Children with Autism

Dressing skills of the individual General Skills		Frequency	Percentage
Tells apart underwear	Always	49	81,7
	Sometimes	9	15,0
	Never	2	3,3
	TOTAL	60	100,0
Tells apart outerwear.	Always	48	80,0
	Sometimes	10	16,7
	Never	2	3,3
	TOTAL	60	100,0
Tells apart bottom clothing.	Always	49	81,7
	Sometimes	9	15,0
	Never	2	3,3
	TOTAL	60	100,0

Table 6: Continue

Tells apart top clothing.	Always	50	83,3
	Sometimes	8	13,3
	Never	2	3,3
	TOTAL	60	100,0
Tells apart clothing by season.	Always	26	43,3
	Sometimes	14	23,3
	Never	20	33,3
	TOTAL	60	100,0

The data in Table 6 show that 81, 7% of the children always tell apart underwear, 15% of them sometimes tell apart underwear and 3, 3% of them never tell apart underwear. 80% of the children always tells apart outerwear, 16, 7% sometimes tells apart outerwear and 3,3% never tells apart outerwear. 81, 7% of the children always tell apart bottom clothing, 15% of them sometimes tell apart bottom clothing and 3, 3% never tell apart bottom clothing. 83, 3% of the children always tell apart top clothing, 13,3% of them sometimes tell apart top clothing and 3,3% of them never tell apart top clothing. 43, 3% of the children always tell apart clothing by season, 23, 3% of them sometimes tell apart clothing by season and 33, 3% of the children never tell apart clothing by season.

Table 8. Distribution of Values Regarding Zipping the Zipping Aids Skills of Children with Autism

Zipping Aids		**Frequency**	**Percentage**
Fastens Velcro	Always	58	96,7
	Sometimes	2	3,3
	Never	0	0,0
	TOTAL	60	100,0
Fastens press studs	Always	38	63,3
	Sometimes	15	25,0
	Never	7	11,7
	TOTAL	60	100,0
Fastens a hook-and-eye	Always	18	30,0
	Sometimes	17	28,3
	Never	25	41,7
	TOTAL	60	100,0
Belts	Always	18	30,0
	Sometimes	14	23,3
	Never	28	46,7
	TOTAL	60	100,0
Buttons big buttons	Always	36	60,0
	Sometimes	10	16,7
	Never	14	23,3
	TOTAL	60	100,0
Buttons small buttons	Always	24	40,0
	Sometimes	14	23,3
	Never	22	36,7
	TOTAL	60	100,0
Zips a zipper with teeth.	Always	39	65,0
	Sometimes	9	15,0
	Never	12	20,0
	TOTAL	60	100,0

According to the values in Table 8, it is seen that 96, 7% of the children always fasten velcro, 3, 3% of them sometimes fasten velcro. 63, 3% of the children always fasten press studs, 25% of them sometimes fasten press studs and 11, 7% of them never fasten press studs. 30% of the children always fasten a hook-and-eye, 28, 3% of them sometimes fasten a hook-and-eye and 41, 7% of them never fasten a hook-and-eye. 30% of the children always belt, 23, 3% of them sometimes belt and 46, 7% of them never belt. 60% of the children always button big buttons, 16, 7% of them sometimes buttons big buttons and 23, 3% of them never buttons big buttons. 45% of the children always button small buttons, 23, 3% of them sometimes button small buttons, and 36, 7% of them never button small buttons. 65% of the children always zip a zipper with teeth, 15% of them sometimes zip a zipper with teeth, and 20 % of them never zips a zipper with teeth.

6. Results

The study was carried out to identify the problems children with autism (aged between 3 and 16) studying in Education Centres for Children with Autism (ECCWA) in Istanbul while dressing and to determine to what extent ready-made garments satisfy the need of these children and it was found out that

- Almost half of the parents of the children with autism stated that they would buy the products of famous brands if they had special clothes designed for children with autism, more than half of the parents stated that they would not buy them. Also, a great majority of the parents would do online shopping if there were websites selling clothes for children with autism.
- Children with autism were found to dirty their clothes while eating.
- Majority of the children with autism tells apart bottom and top clothing and underwear and outerwear, but have difficulty in picking up the right clothes by season.
- While majority of the children do not have difficulty in using zipping aids such as velcro, press stud, big buttons and zips, they have difficulty in using hook-and-eye, belt and small buttons

The following suggestions were made in line with the results of this study.

- Brands should design and produce special clothes for children with autism.
- Dirt-repellent fabrics should be used for clothes for children with autism and so that they are not isolated from their social lives.
- Families should support gaining children with autism dressing skills and families should be involved in the education process.
- If special clothes would not be purchased for children with autism, clothes with velcro, press-studs, big buttons and zips should be preferred.
- In order for dressing skills to be gained in special education centres for children with autism, textile and fashion departments should be applied to and appropriate education materials should be prepared.

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BLUE SKY BIRDS COME TO THE WORLD

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Abstract:

The New Supply System comes to all fields for logistics.Drone is an unmanned vehicle for loading and unloading packages.Perhaps we can imagine it as a "blue sky bird". This new trend has three important impacts that are determined by technoligical capabilities, ,regularity pressure, and public acceptance so that it will be dealed within current powers and circumstances. This kind of vehicles are used in different capacities, such as multicopter,drone or robot.Logistics' issues are interested in short-term delivery systems for customer satisfaction but all developments go through GPS so it is based on 21st century technological developments, which have been tested on a short-term basis and will be expected to be of use in 2 years. The purpose of this research is to give lead to researchers information about risk and the advantages of using the technology in this manner.Some advantages and disadvantages ,schedules' problems in the system will be identifed.

Keywords:

Logistics; Distribution; Drone; Predator; Transportation

1. Introduction:

They are our co-workers we haven't known a until a year before. Drones as you know are literally named as Unmanned Aerial Vehicles which are produced by foreign companies, also need systematic and technological investments however they are not being used in logistics sector nowadays on the other hand their usage is shown as matter of time .They are logistic's robots in our near future so that many important experimentations are being carried through by major companies abroad.

Drones are just vehicles which have a capacity for burden. For the first time, the purpose of their production is based on the defense industry yet planning so many conferences is to show their new meaning to transportation and logisticians who are in emergengy consingment. These birds who are the smallest unmanned airplanes just started to test drive.Of course , they are still in secret.Nowadays , lead companies of logistics significiantly attempt to use them for being in one step ahead.They could be fiery eyes in the transportation.

These tranport officials of package are not designed just as drone furthermore they are named for family tree of the helicopter. According to us, they are stated like that to change the future of logistics.Who knows if you can find the package that is ordered a day before on your balcony thanks to these little transporters.

This new era allows for new apportunities.'Welcome " to new drones, which are new logisticians. Congratulations to our man brand new machines to all logistics' sector.

2. The Aim of the Paper

We will sentence the UAVs' historical settlement for the entire world.In fact, they have already been considered for a long time by amateur , yet all techniques for them are ready to go along in all fields.Especially , indicated technics are familiar with us and our world so that no one is oblivious or disinterested in the internet and its source coming out. Important topics are indicated at the following sentences ;for example reliability,security and infrastructure . All these requirements are explained shortly and introduced so many types of UAVs. Balancing the time and loading – unloding capacity are in connection with upgrading the cities'regularity.Blue sky predators deal with current circumstances today there is plenty of discussion about civil aviation producers for UAVs. Pilotless aerial devices will fill in our sky .In reality , all kind of sectors are willing to have their new hopes but logistic industry put itself forward for it.The importance of the delivery will be correlated with quickness of these sky predators.

Also, urgent deliveries are specified as priority usage for the human being.We are not talking about just drones,multicopters,quadcopters or planes etc.We will be willing to explain the necessity of usage for our technic world .A new era will cover you as soon as possible.

3. Historical Perspective

Due to the fact that it is necessary to defend our precious lands from enemies,we have faced enemy planes similar to drones since the beginning of time.The basic role is stated in army aviation because UAVs have enourmous potential for the battle field so that it is the usage of air power in apparent ways.

UAVs receive a signal from a sensory array which are settled in ground control system and a basic datalink The Navigation System is one of the major subsystems for a UAV.It provides the rest of subystems with the position,velocity and attitudeinformation they require in orderto control the aircraft,manage the mission of inform the pilot (Parra, 2005).

The UAV is also equipped with first person view (FPV) systems for easier and more accurate control by a remote user (Spyridon G.Kontogiannis, 2013). Between 1960s and 1980s , piloted vehicles had a visible popularity but then some problematic term came to recognize in this path so late of 1980s unmanned air vehicle would be discovered even so in the 1990s piloted vehicles were chosen to keep the balance for the new invention such that they had to get an acronym form thence all got the same name as UAV .

Up to now,funding for the development of UAVs has principally been put up by the military and this is expected to remain so fort he foreseeable future.Even though UAVs have been around for nearly 50 years , their military value and complementarity in relation to other weapon systems has not been generally acknowledged and accepted by the military hierarchy and the political establisment until fairly recently (Blyenburgh, 1999).

3.1 Tactical Role

Aviation sector focused on observation and reconnaissance mission in interwar years so these were photo and visual reconnaissance , contact mission and adjusment of artillery fire.UAVs liked better than balloons because commander wanted the men in them to be their eyes in the sky.Observation planes assured more flexibility than balloons because of their grater range.

NATO Operation Allied Force in Yugoslavia has demontrated that a new age in reconnaissance is in fact dawning.For the first time in warfare,commanders at all levels have had nearly continuous,real-time visibility of at least portions of the battlefield through the optical and video sensors carried on U.S. Predator and Hunter UAVs (M.Nutwell, 2000).

Picture 1.

Significant efforts invested in unmanned air vehicle (UAV) technology led to a wide variety of new applications such as aerophotography and surveillance.Parallel advances in avionics and electronics applied to modern UAV technology combined with rapid developments in video and photographic equipment resulted in significant wight reduction,enhanced efficiency ,and quality improvements (Spyridon G.Kontogiannis, 2013).

3.2 Technical Classification

They were developed for military and special operations but also used for growing number of civil aviation so UAVs are specifically designed for logistics and cargo operations and they are recognized how to use for human'n expectations furthermore all technical developments are used to cover their needs'.

UAVs must receive greater priority in Service budgets.Investments in UAV programs are still modest compared with investments in manned aircraft.To some degree this reflects a continuing cultural bias toward manned platforms in the Services (M.Nutwell, 2000).

4. Changes and Challenges

In spite of UAVs' usage purpose in early times, their drifts' route distinctly took some important shape for commercial areas.Especially new innovation system was subsidiary to them upgrading steps. They are considered finding so many ways which are efficient , dependable, fast in logistics' industries.

They can be used to succeed and survive in logistics' sector.Meanwhile they have been growing and using for the sector , all perturbation would come to mind for the future of logistics.It is hard to get them and start to use them in a balance to keep for the human expectations.

Several challenges must be overcome if unmanned vehicles are to realize their promise in the S&R mission

- Vulnerability to air defenses must be reduced through signature reduction and provision of some self-protection capability against battlefield threats.
- All weather capability,including ability to fly in icing conditions,must be provided.
- Agreements,procedures,and capabilities for operating UAVs routinely in controlled airspace must be developed.
- Assured global,wide-band data links that are accesible to multiple echelons of command.
- Reliability must be improved ,not only to reduce attrition rates and life cycle costs but also to facilitate flight in controlled airspace and over populated areas.Key factors in reliability include:redundant critical components;secure,reliable communication links;and enhanced ability for autonomous operations and recovery in the event of the loss of communications (M.Nutwell, 2000).

2.1 Routing

Path planning plays an important role in enhancing the ability of autonomous flight of unmanned aerial vehicle (UAV).By finding a global optimal route offline,the traditional two-dimensional (2D) path planning is popular in static or known environment.But the actual flight environment of UAV is usually dynamic and unknown,where a feasible path should be planned online by dealing with various dynamic situations (Peng Yao, 2015).

Logistic system that is associated with UAVs has got significant opportunities so ongoing projects are tried to coordinate in between basic location spots. Otherwise , traveling problems will be occured in any time without calculating and testing the covered lands.In last few years they are being tested for the kind of problems we greet.

2.2 Scheduling

The unique capability has been provided by this semi self-governing aircrafts so these flying robots are more capable and less expensive thus commercial sector are aware of the smart predators such that seeking to collacate miles and algorithms on that vehicles can be operated by an operator so coordinating loading and unloading services gain to an important role.

On the other hand,flexibility in use,especially in a city environment,demands a short takeoff runways.Therefore,the takeoff distance was set to a maximum of 60 m.An electric power plant for the propeller was selected since it offers low operating costs,simplicity in installation,use,and because it is eco-friendly (Spyridon G.Kontogiannis, 2013). But the other important point that is about the capacity problem occurs on meantime.Because they have got a limited capacity to carry.All them depends on wing lift efficient role ,surface and planform geometry.

So,the electronic and video equipment that the aircraft should typically carry does not exceed a total weight of 3 kg (Spyridon G.Kontogiannis, 2013).

5. Understanding UAVs

Of course , we can face some effective rules to use and put them in an order because regulations are changable situation from country to country on that matter some criticizing moves are settled slowly because solid arguments say that delivering packages to people will irritate other airspace users because airspace crowded in many regions will require maximum control capability on the other hand UAVs are not using just airways but also they are capable of using the land areas because they can stop whatever the controller wants.Not only just a menace for the air also for the land and pedestrians.Besides safety regulations can become to sight in a weakness 'coz of setting up cameras for controlling and seeing where they are going to and how they are finding their way.Nobody can give any guarantee to have more safety.So NASA works to design drone air-traffic control system which is called 'Unmanned Aerial System Traffic Management'.

NASA said on its website: '' A UAS traffic management (UTM) system for low-altitude airspace is needed, much like today's surface vehicles that operate within a system consisting of roads, lanes, stop signs, rules, and lights, regardless of whether the vehicle is automated or driven by a human. www.rt.com/usa/310705 drone-air-traffic-control

Having summarised current NATO efforts and challenges in the field of UAVs,and before elaborating on future UAV requirements,let me now briefly comment on why UAVs are getting higher priority in procurement planning anc acquisition.The short answer is reduced costs and less personel combined with higher efficiency for specific missions.For existing weapon systems,operating and logistic costs are the bulk of total life cycle cost,and the single largest portion of these costs is for personnel (BLYENBURGH, 1999).

In some concepts ,"wartime UAVs" could be operated primarily by reserv personnel who would only be called to active duty as and when required.

The other reason UAVs are becoming more attractive is the advantages provided by not having an onboard crew.By reducing the risk of loss or capture of personnel,the UAV provides a more politically acceptable military system for certain missions. (Blyenburgh, 1999).

From a technological perspective ,social,business and political changes are not more wider than technology ones.In this case, they are expanded in types builded which are fixed-wing ,tilt-wing,unmanned helicopter and multicopter as known as drones.They have different specifications not only leading the range but also taking off capacity.

Table.1

	Advantages	**Disadvantages**
Fixed wing	Long rance-endurance	Vertical take off - landing
Tilt wing	Fixed wing combination	Expensive
Unmanned Helicopter	Maneuverability	High requirements
Multicopter	Inexpensive,Low weight	Limited payloads

Combination Of Uavs can be identified them into different categories such that long - short range ,inexpensive - expensive , low-high payloads , uncomplexed - complexed models.Multicopter,octocopter, etc.

6. Logistics' Impacts

As we mentioned before these new birds on air help to transport from one place to another.This improved air vehicles as known UAVs allow all logistics and supply chain managements advanced scopes as cheaper and smarter transporter . Digital technology in this case are growing much faster without any doubt.Meanwhile,all kind aircraft have the capability of autonomous flight ,it means that there is a mission from point to another one.

GPS has accommodate with sensor,batteries or other signal which comes from on ground to remote UAVs .Air freight delivery system can be easily adopted to use particular package transportation. Recognizing package space delivery needs short line will help all logistic systems to understand how to use them in efficient way.

Picture 2

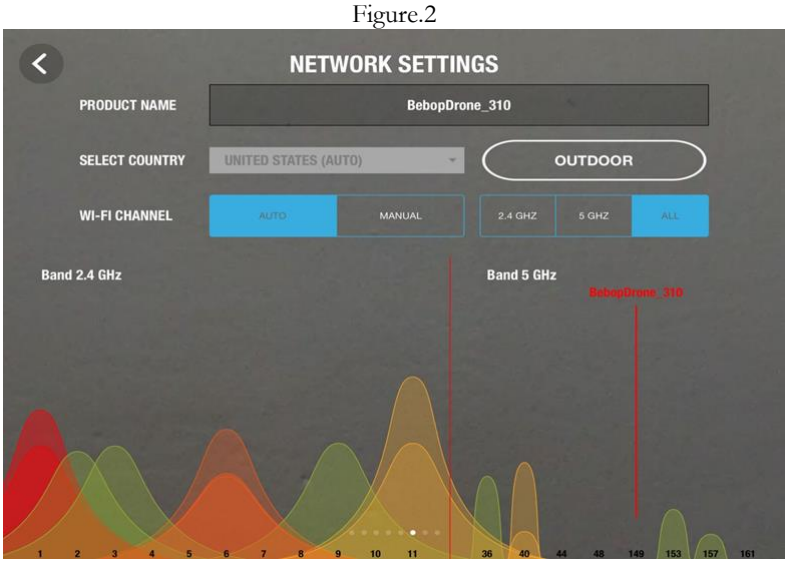
We must also consider the future role of UAVs and other aircraft with respect to spaceborne reconnaissance platforms.Spacecraft provide wide geographical coverage and Access to regions denied to aircraft,can respond rapidly to missions in different regions,and are invulnerable to conventional countermeasures.Airborne S&R platforms provide under-the-weather coverage , video, dwell for imagery and video , operational flexibility,and the ability to address some regions not covered by overhead assets.In short,airborne and spaceborne reconnaissance platforms complement each other. (M.Nutwell, 2000)

This new transportation mode is emanated but developing and maturing will be happened sooner than we think.Human beings must be aware of facing with road-drones (driverless truck) for the road transport.Stay tune.

The Approach To The Newest Anthology Of Technic For The Logistics

Before 5 years ,there weren't this kind of camera system which are smaller and sharper also fast microchips on the other hand batteries weren't so light and long durability.This new transporter is a virtual availability of the real man but usage of them for logistics are stil in early stages.But book rental services are ready to use them because aim is to reduce to wait the delivery from two to three days , to as little as two to three minutes.The most important thing is existing facilities like hubs,warehouses,crossdocking sites.In addition to weight,size and critical time and also there are some criteria could include road,air conditions and network load.

Figure.2



A network of mobile sensors has demonstrated the ability to enhance sensing flexibility and achieve the mission objective in a shorter time period.Decentralization among the sensors further provides scalability,modularity,and redundancy to the network This reduces the vulnerability to central server failure,which further enhances to overall system robustness (Pablo Lanillos, 2014).

Emergency transport comes in this stage especially picking up time critical shipment as blood,medicine,serum. Of course there might be needed a notification for customer satisfaction or in case of returns and insufficiency customer location .

Picture. 3

Also ,UAVs have scanned the barcode on the package and controlled the route to determine the distance.After delivery , they return to rechargable area on the ground or on a vehicle and they can do it wirelessly. UAVs look like

blue birds in ancient times , they transport light package to the receiver.The most amazing trick is identifying the customer via QR code then they hand over it because getting approval helps to gain trustworthiness.

Locations are highly dissimilar all over the world such as UAVs could drop the package in a garden or a balcony , they must use the roof for large buildings.Perhaps this idiomatic problem can be solved making an alternative delivery area or point like a box which is upgraded station to handle shipments. Multi-sensor coorrdinated search problem considers a team of mobile sensing platforms capable of maneuvering freely and gathering information about the existence of targets within a defined workspace (Pablo Lanillos, 2014).

7. Emergency Response for the Logistics

Logistic companies pay attention for the process with occured just in time so that emergency deliveries can be performed by the UAVs because they are easy to distribute and there is no requirement for well trained personel .Express delivery system can be put in order to do operations such as spare,machine or precession parts.Intralogistics need to cover the private demand in case of emergency operations and providing the major advantages because of more flexibility and accessibility.

Picture. 4

The other aspect is that The Commercial use of UAVs could have a beneficial effect on the use of military UAVs,as economies of scale would then become possible.The commercial use of UAVs is not only being severely limited by air traffic management issues and high price of ownership and insurance (in relation to manned aircraft).The high cost of insurance severely limits the interest of leasing UAV systems for commercial (or military applications) and is generally attributed to the unproven reliability (safety) of Uavs;once UAV technology has proven itself a little more,and acceptable UAV system qualification norms exist,their cost should come down (Blyenburgh, 1999).

Picture. 5

8. Conclusion

This paper has introduced the features of the UAVs maybe it is likely to face some challenges , privacy concerns , perfection into existing networks. Logistic industry is ready to use them for urgent- express shipments ,potentially aims to upgrade the delivery speed which effects the its time and also , using global trade networks can provide rural deliveries inadequated areas. Technological developments and changes in a short period will require the some arrangements in applicable law of UAVs.This kind expectations will be fined over the next few years.

UAVs are currently at a major turning point in their history.After decades of limited success and some failed promises,the UaAV has become a real hope for the future (Kreienbaum, 2000). The age of unmanned air vehicles has arrived.The confluence of technology and tactical considerations,especially the thirst for " dominant battlespace awareness" and the desire to avoid aircrew losses,has resulted in increased reliance on unmanned vehicles for S&R and for other missions (M.Nutwell, 2000). UAVs' projects will be ameliorated in certain ways. Several works have been extended in many modalities.We need little more time to see them in the air and look forward to great opportunities.

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