EUROPEAN RESEARCHER
International Multidisciplinary Journal

Has been issued since 2010. ISSN 2219-8229, E-ISSN 2224-0136.
2014. Vol.(77). № 6-2. Issued 12 times a year
Impact factor of Russian Science Citation Index 2012 – 0,259
Impact factor Index Copernicus 2011 – 5,09

The journal is registered by Federal Service for Supervision of Mass Media, Communications and Protection of Cultural Heritage (Russia). Registration Certificate **ПИ № ФС77-50466** 4 July 2012.

Journal is indexed by: **Academic Index** (USA), **CCG-IBT BIBLIOTECA** (Mexico), **DOAJ** (Sweden), **Galter Search Beta** (USA), **EBSCOhost Electronic Jornals Service** (USA), **Electronic Journals Index** (USA), **Electronic scientific library** (Russia), **ExLibris The bridge to knowledge** (USA), **Google scholar** (USA), **Index Copernicus** (Poland), **math-jobs.com** (Switzerland), **One Search** (United Kingdom), **Open J-Gate** (India), **Poudre River Public Library District** (USA), **ResearchBib** (Japan), **Research Gate** (USA), **The Medical Library of the Chinese People's Liberation Army** (China).

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Postal Address: 26/2 Konstitutcii, Office 6 354000 Sochi, Russia

Website: http://erjournal.ru/en/index.html
E-mail: evr2010@rambler.ru
Founder and Editor: Academic Publishing

Passed for printing 25.6.14.
Format 21 × 29,7/4.
Enamel-paper. Print screen.
Headset Georgia.
Ych. Izd. l. 5,1. Ysl. pech. l. 5,8.

EUROPEAN RESEARCHER

2014

№ 6-2

ЕВРОПЕЙСКИЙ ИССЛЕДОВАТЕЛЬ
МЕЖДУНАРОДНЫЙ МУЛЬТИДИСЦИПЛИНАРНЫЙ ЖУРНАЛ

Издается с 2010 г. ISSN 2219-8229, E-ISSN 2224-0136.
2014. № 6-2 (77). Выходит 12 раз в год.
Импакт-фактор РИНЦ 2011 – 0,259
Импакт-фактор Index Copernicus 2011 – 5,09

Журнал зарегистрирован Федеральной службой по надзору в сфере массовых коммуникаций, связи и охраны культурного наследия (Российская Федерация). Свидетельство о регистрации средства массовой информации **ПИ № ФС77-50466** от 4 июля 2012 г.

Журнал индексируется в: **Academic Index** (США), **CCG-IBT BIBLIOTECA** (Мексика), **DOAJ** (Швеция), **GalterSearch Beta** (США), **EBSCOhost Electronic Jornals Service** (США), **Electronic Journals Index** (США), **ExLibris The bridge to knowledge** (США), **Google scholar** (США), **Index Copernicus** (Польша), **math-jobs.com** (Швейцария), **Научная электронная библиотека** (Россия), **Open J-Gate** (Индия), **ResearchBib** (Япония), **ResearchGate** (США), **The Medical Library of the Chinese People's Liberation Army** (Китай) и др.

Статьи, поступившие в редакцию, рецензируются. За достоверность сведений, изложенных в статьях, ответственность несут авторы публикаций.
Мнение редакции может не совпадать с мнением авторов материалов.

Адрес редакции: 354000, Россия, г. Сочи, ул. Конституции, д. 26/2, оф. 6
Сайт журнала: **http://erjournal.ru/**
E-mail: **evr2010@rambler.ru**

Учредитель и издатель: ООО «Научный издательский дом "Исследователь"» - Academic Publishing House *Researcher*

Подписано в печать 25.6.14.
Формат 21 × 29,7/4.
Бумага офсетная.
Печать трафаретная.
Гарнитура Georgia.
Уч.-изд. л. 5,1. Усл. печ. л. 5,8.
Тираж 1000 экз. Заказ № 146.

ЕВРОПЕЙСКИЙ ИССЛЕДОВАТЕЛЬ
2014
№ 6-2

CONTENTS

Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1112-1116, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

Biological Sciences

Биологические науки

UDC 574

Bio-ecological Peculiarities of Genus Pinus L. Species Under Conditions of Eastern Georgia

[1] Tamar Nadiradze
[2] Tea Mchedluri

[1] Iakob Gogebashvili Telavi State University, Georgia
2200 Telavi, 1, Kartuli Universiteti str.
Doctor of Biological Sciences, Professor
E-mail: nadiradze_t@yahoo.com
[2] Iakob Gogebashvili Telavi State University, Georgia
2200 Telavi, 1, Kartuli Universiteti str.
Doctor of Biological Sciences, Professor
E-mail: mchedluri.75@mail.ru

Abstract. The article discusses bio-ecological peculiarities of the following species of genus Pinus L. spread in eastern Georgia: **Pinus eldarica Medw.**, **P. griffithii McCleland.**, **P. cembra L.**, **P. pallasiana Lamb.**, **P. pinea L.**, **P. sabiniana Dougl.**, **P. sylvestris L.**, **P. sosnowskyi Nakai**, **P. strobus L.**, the perspectives of their usage in Green Building and contemporary problems.

We have studied the periods of bud opening, vegetation ending, starting and finishing of cambium action, sprout woodening process, time and rate of growing in height, and regularities of accumulation-transformation of storage carbohydrates.

The studies revealed that the annual development cycle of all these species includes all morphological -physiological periods: sprout growth, latent growth, organic and forced rest. They are characterized by the good growth-development; almost all of them are perspective for eastern Georgia, particularly, for all regions of inner Kakheti.

However, in recent years, massive drying up of pine forests groves takes place in eastern Georgia. That is why it is necessary to conduct the fitopatologic research, identify the pest causing the damage and plan the measures against it.

Keywords: Pinus; spread; evergreen; coniferous; vegetation; cambium; life expanse; height growth period. accumulation- transformation of carbohydrates.

Introduction

From the gymnosperm of modern flora, coniferous plants are the richest in representatives. Genus Pinus L. involves approximately 100 species, naturally spread in the North Hemisphere. More than 40 species are introduced in Georgia.

We have studied the bio-ecological peculiarities of the following species of Genus **Pinus** spread in eastern Georgia **Pinus eldarica**, **P. Griffithii**, **P. cembra, P. Pallasian, P. pinea, P. sabiniana**, **P. sylvestris**, **P. sosnowskyi, P. Strobus.**

Pinus eldarica is widely spread in local culture. It naturally spread in Eastern Caucasus, on the right bank of the River Iori, at an altitude of 450-600 m. It likes light and warmth. When cultivated at the height of 700-800m and higher, there is not enough heat and is damaged by the winter frosts. Frost resistance does not exceed -20 – 22^{o} [1]. It is xerophytes species. In comparison to local pines growing in Georgia, **Pinus eldarica** is the most frost-resistant. This species is characterized with the slow growth and is widely used in the greenery of eastern Georgia.

Pinus griffithii is naturally spread in Himalayans, at an altitude of 1600-3000-4000 m. In the homeland it reaches 30-50 m in height, has a half-conical trunk, is slightly demanding to the soil and air moisture and is characterized with a good growth and development in arid as well as in humid regions [1]. It has been cultivated in Europe since 1823, and since the second half of the XIX century - in Georgia. Here it exists in western, as well as in eastern parts of the country. The best conditions for its growth and development are on the Black Sea coast, but it grows well in eastern Georgia as well, particularly, in Tbilisi, Telavi. Kvareli, and Lagodekhi.

From the **Pinups griffithii** specimen growing in Georgia, the best-developed individuals are in Kakheti, particularly, in Tsinandali Park. Here these trees, aged 100, reach 30 m in height and 80-85 cm in width [2]. In decorative gardening, **Pinus griffithii** is very popular with its conical trunk, long grizzled needles and cylindrical cones of 15-20 cm. Cultivation of this species is possible up to 1000-1200 m height. It is easily reproduced by the seed, provides self-crops and fruit-bears abundantly. **Pinus griffithii** is perfect for greenery of inner-Kakheti regions.

Pinus cembra is naturally spread throughout Siberia. In the homeland it grows up to 35 m in height and 1,8 m in width; has grey bark. It grows slowly, but lives up to 5000 years. In Tsinandali Park, there are three specimen of **Pinus cembra.** One of them is 11-15 m in height and 45 cm in width.

Pinus pallasiana is naturally spread in: western part of Asia Minor, Balkans, Austria and western Caucasus. In the homeland, it reaches 30-40 m in height. It was introduced in Georgia in the 80s and 90s of the XIX century and widely spread in decorative gardening and forest cultures [1]. Adapts well to humid, as well as to arid climate, is frost and drought resistant, grows well on poor, rocky soils, loves the light, stands against the partially salted soils, smoke, etc.

In Tsinandali Park, **Pinus pallasiana,** aged 100, has 23m height and 70-80cm width [2]. It is distinguished by the good growth-development here, as well as in Tbilisi and other regions of Kakheti: Telavi, kvareli, Lagodekhi. Therefore, it is widely cultivated all around Kakheti.

Pinus pinea is naturally spread in the coastal countries of Mediterranean - Italy, Portugal, Spain, Asia Minor, mainly in the coastal area, and rarely – in mountains, up to 1000m from the sea level. In the homeland, it grows up to 30m in height, is characterized by the roundish or umbrella-shaped trunk [1]. **Pinus pinea** is semi-xerophytes species, loves warmth and stands well against the limestone soils. It was introduced in Georgia after the second half of the XIX century; adapts well to humid and arid conditions; fruit-bears from the age of 20. The cone ripens in the third year after the pollination.

Pinus sabiniana is naturally spread in western California; is limited in its representatives in the mountains of the coastal area of the ocean and on the western slopes of Sierra-Nevada, at the height of 1500-1800 m from the sea level. In the homeland, it grows up to 30 m in height and 120 cm in width [1].

Pinus sylvestris is naturally spread in western Europe, from the Scandinavian peninsula to the Balkans; in Russia it is met in Siberia (to - N.L. 70^{o}) and reaches the coats of the Sea of Okhotsk (N.L. 60^{o}). It grows on various soils. In the homeland, it grows up to 30-40m in height. It has been cultivated in culture since the ancient times. **Pinus sylvestris** is frost and drought resistant.

Pinus sosnowskyi is a local pine, spread almost everywhere in the Caucasus and considered to be one of the main breeds of the forests. It loves the light and grows to 30-35m; has a roundish or pyramid trunk; lives up to 400 years. The wood of **Pinus sosnowskyi** has valuable economic characteristics. Its health and sanitary-hygienic significance is particularly high.

Pinus strobus is naturally spread in North America and Canada. It exists in form of pure or mixed graves. It is characterized with the wide area of spreading. In the homeland, it grows to 40-50m in height and 100-180 cm in diameter. The branches are located circularly on the stem, forming the wide pyramid trunk. **Pinus strobus** is characterized with the fast growth, that contributes to its rapid spread outside the homeland. It grows on any kind of soil, is frost-resistant, and stands against -26-30^o.

Pinus strobus is very often met in eastern Georgia. Here it was introduced in the 80s of the XIX century. It is widely used in Tbilisi greenery, Botanical Garden, Tsinandali Park, Telavi, Lagodekhi and in other regions of eastern Georgia.

Sources and methods

The aim of our research was the study of bio-ecological peculiarities of the listed species of genus Pinus L. introduced in Georgia; summarizing the issues of their introduction-acclimatization. For this reason, the observation has been conducted on the selected specimens since 2001. The penology and penometry has been conducted on the selected plants systematically, once or twice in the decade. We have observed the periods of bud opening, vegetation ending, starting and finishing of cambium action, sprout woodening process, the time and rate of the height growth.

Besides the apical growth, the cambial growth of the lateral branches has also been studied. For this purpose we took the patterns from the twigs once in every ten days from the early spring to the late autumn, then placed them in 60-70% alcohol [3], [4], [5], and observed the dividing of the cells of secondary meristem and development of annual cycle through a microscope. Transverse veneer was taken with safranin and the process of new wood cells development was determined; we conducted the research according to the methodical instructions by Yatsenko-Khmelevski, 1954, Lobzhanidze E., 1961, and Tsitsvidze A., 1973.

We have also studied the peculiarities of accumulation and transformation of storage carbohydrates in the lateral branches with regard to annual development rhythm and overcoming winter frosts. For this purpose in the third decade of each month, the analyzing samples were taken every morning. By the influence of chemicals on the diametrical slices, we studied carbohydrate content. Starch content was determined by the Potassium iodide (starch stained in blue), sugar – by alpha-naphthol, and concentrated sulfuric acid (stained in purple), and fats with the help of Sudan III (color - orange) [6]. We used a five-point system (1- very small, 2-small, 3-satisfactory, 4-much, 5 – too much).

Conclusions

The research revealed that under the conditions of eastern Georgian, the studied species begin growth in spring, when the average daily temperature is 5-10^o, and end at different times, depending of the endogenic and exogenic factors, in May-June in lateral and in June-July - in top branches.

Besides, we have noticed that on **Pinus griffithii** and **Pinus strobus,** the growth is more intensive at night, than in the day. It mostly refers to the sprout lengthening. For example, for 10 days /from April 20th to April 30th/ the growth of **Pinus griffithii** and **Pinus strobus** during the night was 2,5cm and during the day -1,8cm. In addition, revealed that the sprout growth is not continuous, resting period 2-3 days, rarely – 4days, after about 8-15 days of growing.

Duration of the height growth of **Pinus griffithii** is 70-75 days, cambium activity lasts for 140-150 days; fruit-bears abundantly; seed fullness is 50-80%. Average starting date for cambial growth is April 30. Deviation from the average date is 7 days in both directions. The variation coefficient is 10%, so 15 years of observations are needed to determine relatively exact date.

In addition to the linear growth, we have studied the process of thickness growth /on the example of dried and fallen trees/ using the taxation method. **Pinus griffithii** finishes the radial growth approximately on October 10. Deviation from the average date is 10 days; growth duration - 147 days. The maximum starch amount in the branches of **Pinus griffithii** was observed in April-May and September-October. Besides, the maximal amount in spring exceeds the maximal amount in autumn. This suggests that this pine produces photosynthesis in winter as well. Fat content is quite high in summer. Quantitatively it rises in autumn-winter and equals to 3 points, probably due to the fall of temperature. **Pinus griffithii** is a very interesting species for eastern Georgia, especially for Kakheti greenery-foresting.

Pinus eldarica is very perspective for eastern Georgian conditions, so in this region, there are more than hundred hectares of cultivated forests with **Pinus eldarica**. Almost all forms are used in greenery of parks and gardens, street plantations, road greenery, alley formation, etc. **Pinus eldarica** forms a well-developed trunk, fruit-bears abundantly, and in most cases, reproduces by self-sowing. However, in recent years, trees in groups or individually are drying. In our opinion, this may be caused by the breach of water balance in soils or humidity, and pests. Therefore, we believe that it would be reasonable to cultivate it not in pure (only **Pinus eldarica)** but in forms of mixed plantation.

Seed fullness of **Pinus cembra** is 3-5%. Such a low quality is because the cold zone plants require long-term effect of low temperature for normal development of generative organs. That is why; lime content in soil, short days and relatively warm winter is restrictive for their growth-development here. Therefore, this species is almost useless for greenery and foresting of eastern Georgian regions (in oak belt and lower).

Pinus pallasiana begins the bud opening in the first decade of April. The growth duration is 60-65 days; cambium activity period – 150-160 days, seed fullness – 60-80%. Two peaks of maximal starch content in the branches were observed in summer, and relatively lower- in August-September. Starch content decreased in January, when the air temperature equaled - 9,5°. At this time, fat content was maximal and equaled 5 points. Sugar content increased from autumn to January and in February, it decreased to 2 points from 3.

Pinus pallasiana is distinguished by the good growth and development in Tsinandali Park, as well as in other regions of Kakheti. Therefore, it is widely cultivated throughout Kakheti. In Telavi **Pinus pallasiana** culture is artificially cultivated on approximately 6 hectares.

At the age of 30-40 **Pinus sosnowskyi** is 15-18 m in height; stem diameter is 28-30 cm; fruit-bears regularly (seed fullness is 80-90%) and reproduces by self-sowing as well.

Well-developed specimens of Pinus pinea exist in Tbilisi, as well as in Tsinandali Park, where two of its centenarian trees are characterized with good growth-development (diameter – 75-88 cm, height – 18-20 m). **Pinus pinea** is perspective for eastern Georgian regions and from the decorative viewpoint, great attention should be paid to its widespread planting in greenery.

At the age of 70, **Pinus sabiniana** reaches 16m in height and 50cm in diameter in Tsinandali Park. It fruit-bears abundantly and hardly ever dies from droughts. This species loves light, does not stand against darkening, slightly demanding to the soils, adapts well to grey-brown soils of neutral and weak alkaline reactions; is not damaged by the frosts.

In Tsinandali Park, 59-60 years old **Pinus sylvestris** grows up to 20m and 30-32 cm diameter; pollinates in late April and mid-May. In eastern Georgia, it is hardly ever cultivated. It loves light, cannot stand darkening and saline soils.

Various forest cultures of **Pinus sosnowskyi** covers several hundred hectares in eastern Georgia and has been included in the artificial forest cultivation assortment for a long time. 30-40 years old specimens, existing in Telavi, are 15-18 m in height, 28-30 cm in stem diameter, fruit-bear regularly (seed fullness -80-90 %) and reproduce by self-sowing as well.

Pinus strobus is characterized with a good growth-development in Tbilisi, Telavi, Tsinandali Park. About 90-100 years old specimen reaches 20-21 m in height and 70-75 cm in width; fruit bears abundantly; seed fullness is 30-40 %; sometimes provides self-sowing as well. It begins growing in May. Growth duration is 40-45 days; duration of cambium activity – 145-150 days. It grows so well in Kakheti that may be widely cultivated in decorative gardening and forest cultures.

Thus:

The annual development cycle of the woody plants introduced in eastern Georgia involves all morphological - physiological periods (sprout growth, latent growth, organic and forced rest). At the beginning they grow, then pollinate and continue growing. Pollination of the studied plants, in spite of small changes, is almost the same as of those in natural spreading area.

The regularity of accumulation-transformation of carbohydrates correlates to the annual development cycle. Maximal starch content was revealed in autumn – September-October and in spring –April-May. Starch transformation into sugar begins in autumn, before the frosts.

Sugar and fat accumulation in winter is more active in temperate and cold zone plants. Frost-resistance is higher among the plants morphological-physiological process rhythm of which have synchronous connection to eastern Georgian climate seasons and fully transfer the starch into sugar and fat. This kind of rhythm ensures the plants dynamic unity with the surrounding environment. The vast majority of plants growing in eastern Georgia (Tbilisi, Telavi, Tsinandali, Kvareli, Lagodekhi) can be assigned to this group.

However, despite above mentioned, during the last 6 years reddening of needles, young sprout drying, stem damage by pests in artificial and natural groves of pine forests is observed in all regions of eastern Georgia. During the last 2 years, massive drying of pine groves takes place.

We suggest conducting fitopatologic research, identifying the pests causing the damage and planning the measures against them.

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1117-1121, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

UDC 574

In Situ Conservation of Some Rare and Endemic Species of Iridaceae Family in National Botanical Garden of Georgia

[1] Tamar Nadiradze
[2] Nino Eradze

[1] Iakob Gogebashvili Telavi State University, Georgia
2200 Telavi, 1, Kartuli Universiteti str.
Doctor of Biological Sciences, Professor
E-mail: nadiradze_t@yahoo.com
[2] National Botanical Garden, Georgia
0114 Tbilisi, 1, Botanicuri str.
Doctor of Biological Sciences
E-mail: n.eradze@mail.ru

Abstract. The article covers some information on anthropogenic influence upon natural ecosystems that is considered to be one of the strongest factors for reducing biodiversity of Georgian flora.

With this purpose, some species of fam. ***Iridaceae*** that need to be protected under ***in situ*** conditions are being studied.

The paper focuses on the fam. **Iridaceae**. This family is particularly interesting as it unites a considerable number of valuable, beautifully flowering plants with ornamental leaves, representing different biomorphs. Particularly rare and endangered species are: ***Iris iberica***, *I.* ***Grossheimii***, ***I. Lycotis***, ***I. Camillae***, ***I. Elegantissima***, etc.

We have carried out complex studies of bio-ecological peculiarities of bulbous geophytes and ephemeroids of genus ***Iridodictyum winogradowii***, ***Ir. Reticulatum***, ***Siphonastilis lasica*** and ***Iuno caucasica***. There has been studied rhythm of growth and development of vital cycle of monocarpic shootings and ways of their propagation in the sub arid zone of East Georgia. There should be mentioned that they have perfectly adapted to the conditions.

Such rare species of rootstock plants like ***Iris iberica***, *I.* ***Carthalinical***. ***Aphylla***, *I.* ***graminea***, *I.* ***imbricata***, *I.* **timofejewii**, *I.* ***prilipkoana***, *I.* ***musulmanica***, ***Siphonastilis lazica*** and others even give abundant self-seedlings that undoubtedly makes it possible to protect them from being finally extinct.

All the investigated plants can be recommended for using in landscape architecture under the conditions of East Georgia that will contribute to conservation of the valuable genofond of relict and endemic plants of Georgian flora.

The work deals with the results of in situ conservation of some of rare and endemic species of fam. Iridaceae from Iridaceae Juss family.

According to IUCN categories, the studied taxaare discussed as the endangered species in nature.

Keywords: endemic; plants; endangered; species; relict; *ex situ; in situ* conservation.

Introduction

The problem of protecting vegetable cover as well as the whole environment has never had such a great importance as today. Because of human impact the natural landscape is being sharply altered, biogeocenose is violated and is followed by ecological changes and decrease of flora species.

Protection of biodiversity of Caucasus, particularly of Georgia, and methods of purposeful utilization are not properly defined and studied. Therefore, protection and preservation of, rare, endemic and relict species through the ex-situ conservation are considered very serious and important matter.

Botanical gardens play special role in vegetation preserving, their activities are based on existing of plant collections and scientific-research works carried out on them. From this viewpoint it's quite interesting to study some of the iris species form the fam. **Iridacecae** in the conditions of ***ex situ*** conservation in semiarid zone of Tbilisi.

Fam. Iridaceous is cosmopolitan, it combines 82 names and about 17000 species, that is characteristic for South Africa, east Mediterranean, central and North America. Fam. Iridaceous is represented by 210 species, spread in Eurasia, North Africa and North America. Thirty species grow in Caucasus and 11 species – in Georgia [1].

They belong to ecologically open space plants; grow in swampy places as well as in different types of meadows, from the lowlands to the highlands.

According to lots of years of observation, it must be mentioned, that in recent period the total number of nearly all species of fam. Iridaceae is significantly reduced. Some of their populations are destroyed due to the violation of where bouts conditions; the majority of them are found sporadically in the form of individuals or small groups. They are differentiated morphologically, bio-ecologically and are distinguished by the diversity. Most of them adapt well to the climate conditions of Tbilisi that allows their introduction in culture.

Materials and Methods

Over the years, bio-ecological observations are carried out on Iris species introduced in National Botanical Garden of Georgia in conditions of their ex-situ conservation.

Genera *Iuno*Tratt; -I*uno caucasica* (Hoffm.) Klatt; *Iridodictyum – Iridodictyum winogradowii* (Fomin) Rodionenko*; Iridodictyum reticulatum* (Bieb.) Rodionenko*; Siphinostylis* W. Schulze.-*Siphinostyli slazica* (Albov) W.Schulze have been studied [6].

From genus Iris the following species have been studied: *Iris aphylla* L., *I. camillae* Grossh.,*I.carthaliniae* Fomin, I.graminea L., *I. elegantissima* Sosn., *I. grossheimii* Woronow ex Grossh., *I. hungarica*. Waldst.,*I. iberica* Hoffm., *I. imbricate* Lindl., *I. lycotis* Woronow., *I. musulmanica* Fomin, *I. prilipkoana* Kem.-Nath, *I. pseudacorus* L., *I. timofejewii* Woronow [6].

We have studied: bio-ecological peculiarities of each species, rhythm of development of underground and over ground organs of investigated plants, identifying potential abilities of adaptation, changeability of development rhythm, renewal bud formation in bulb, root formation, determination of bud type location, and time of formation and development of monocarpstem, vegetative and generative reproduction.

The species have been divided into phenological groups: evergreen, summer green and autumn-wintergreen.

Braun-Blanqet's method (Braun-Blanqet, 1951) was used for measuring viability and productivity of target species. Phenological observations were carried out on each parameter of a plant. We used the Methodology of Phenological observations in Botanical gardens (Methodology of Phonological Observations in Botanical Gardens, 1975) [4]. Vital form of plant was studied by Raunkier's (Raunkier 1934) method [3]. Criteria of qualification of critically endangered species were determined according to IUCN categories. Nomenclature of the species was approved according to S. Czerepanov (1995) and R.Gagnidze (2005) [5, 6].

Results and Discussion

Thus, fam. Iridaceae plants are differentiated according to the different heights from the sea level. Therefore, they have different requirements in culture towards the moisture; e.g.: *Iris pseudacorus, I.sibirica, Siphonostylis lazica, Iris carthalinica, Iuno caucasica* develope well in wetlands and loose soils, and *Iris prilipkoana, I.camillae, I.graminea, I.hungarica, I.elegantissima, I.imbricata, I.iberica, I.lycotis, I.aphylla* adapt well to sunny, dry and stony places in Tbilisi and are characterized with satisfying growth and development.

Based on eco-morphological peculiarities, *Iris musulmanica, I. graminea, I. sibirica, I. pumila, Siphonostylis lazica* reveal tropic and sub tropic features during the whole vegetative period and remain evergreen species, meanwhile other representatives of fam. Iridaceae, like *Iridodictyum winogradowii, I.reticulata, Iuno caucasica* move to the biological rest period like ephemeroid plants.

*Iridodictyum winogradowii*is characterized be the interesting bio-ecology. That is noteworthy for being included in the Red Book of Georgia as a rare, endemic plant of local distribution. Although it is an Apinebelt plant (its classical spreading place is Mountain Lomis 2157 m. high from the sea level) it was adapted to the sub arid zone of Tbilisi. In culture it begins vegetation in the second decade of March, delivers small leafless flower before the stem development, and after the finishing of blossoming delivers 2 short four facet leaves. Blossoming lasts for 8-10 days. After the seed maturing, the root depletes completely and bulbs begin existing independently.

Compared with it, *Iridodictyum reticulata* and *Iuno caucasica* adjust better to the rocky soil of National Botanical Garden, as these plants grow in shrubs and steppes in the lower, middle, and upper belts of mountain. They start flowering in February and March. Over ground organs get dry in May. Their vegetation (over ground) lasts 4-5 weeks, and during the rest period, generative and vegetative organ formation takes place in underground organ (bulb).

Iridodictyum winogradowii, I.reticulatum and *Iuno caucasica* are the ephemeroids of special group, bulb plants, that have developed special growth rhythm during their evolutionary development, which enables them to finish vegetation and pass into the biological rest period before the unfavorable conditions (summer, drought, lack of sediments, etc.). Depending on the climate conditions of the current year, the plants begin flowering from February-March. Rapid flowering begins along with the rise of temperature. This period lasts 8-10 days. After the bud formation, they develop long quadrangular stems, which dry in May-June, right after the seed maturing. During the rest period 1 or 2 bulbs develop on the maternal bulbs and continue their development with them in the soil. There the bulbs continue slow growth and still develop new buds, flower stalk and leaves.

According to their biological and ecological peculiarities, we have divided the mentioned plants into the following groups:

1. Hydrophytes: *Iris pseudacorus, I.musulmanica, I.sibirica.*
2. Mezofites*: Iris carthaliniae, I.prilipkoana, I.imbricata, Siphonosty lislazica.*
3. Xero-mezofites: *Iris imbricata, I.pumila, I.graminea, I.timofejewii, I.aphylla*
4. Mezo-xerofites: *Iris iberica, I.lycotis, I.elegantissima, I.camillae, I.paradoxa, I.grossheimii.*
5. Krio-mezofites: *Iridodictyum reticulatum, I. winogradowii, Iuno caucasica.*

Representatives of *Iris iberica, I. elegantissima, I.camillae, I.paradoxa, I.lycotis*and *I.grossheimi* are characterized by almost the same bio-ecological peculiarities. After the finishing of floweringin June – July of the same year, the plants lose their over ground parts and develop the parts underground for the next year. Here conception and development of monocarp stem buds take place, which, as we have observed, lasts for more than two years. In the first year root-close leaves and flower stems are formed, in the next year the stem passes into the generative phase of development: the plant blossoms and then dies. They stay over ground just for 3-4 months, and vegetate underground for 7-8 months.

As for Georgian *Iris iberica,* this eastern Caucasus endemic specie is included in the Red List of Georgia. In culture, it starts vegetation in autumn, from September, after the summer rest period; Active vegetation begins in spring, from March and lasts 120-145 days; Blossoms in April and ripens in June. 56- to 60 wrinkled seeds are per box. The whole development cycle finishes with losing over ground parts after the vegetation. In summer and winter period, the vital processes are decelerated.

Important morphological changes take place on every stage of development of experimental plants, from blossoming to seed ripening. Development of morphogenesis differs according to species in culture. Therefore, we found it necessary to study bio-ecological peculiarities of each species that allowed us their protection in culture.

The studies of morphogenesis have assured us that development terms of generative stem are changeable according to the species due to their seasonal development.

The flower bud development and flowering period depend on their geographical and ecological conditions; e.g. generative stems of *Iris carthaliniae, I.imbricata, I.prilipkoana, Siphonostylis lazica* form in earlier terms than those of *Iridodictyum winogradowii, Iris timofejewii* and others. These plants belong to Alpine meadow plants, and therefore flower stem forms later than in lower belt plants; e.g., *Iris prilipkoana, I.musulmanica* are characterized by the high amplitude of adaptation in culture. Here they advance in flower bud conception in the top and lateral buds.

Morphogenesis studies of Iris (fam. *Iridaceae)* in Tbilisi conditions revealed that two rest periods in winter and summer are very insignificant. In winter, with the fall of temperature, minor break for organ formation can be noticed on the central and lateral stems of plants. The flowers form and develop almost simultaneously, but very slowly. In the hot and dry, vegetative period of a year (June, July, August) monocarp stem development is in progress, that is advanced by the conception and differentiation of new update buds. In the first year, after the bud opening, the plant develops assimilating leaves, and in the next year – generative stem, which dies after the finishing of blossoming and fruit bearing. Update buds are formed on them every year during spring and summer, and leaves are formed in autumn-winter period. In the time of seasonal development, the period of flower bud development depends on their geographic and ecological peculiarities. If the plant develops healthy, able to arise seeds in culture, it means that it is possible to protect and save this specie. Observations were carried out on the flower fertilization processes in order to prove this.

It has been revealed that Iris flower fertilization is performed through the cross-pollinating by insects, mainly by the sucking ones. Cross-pollination is also promoted by the biological phenomena – protandry, which proves that in the flower the stamen matures before the pistil. There also occur self-pollination cases, but in these cases, the fruits and the seeds are less developed.

The time and ability of seed arising differ according to the species, as both fertile and sterile kind of seeds can be found in the box. Rapid reproduction and survival of different kind of species depend on the seed quality; e.g., *Iris carthaliniae I. prilipkoana, I.iberica* and *I.aphylla* and other species produce about 30 fertile seeds per box. It must be mentioned that the seeds do not sprout simultaneously. Shoots appear gradually each year, the percentage of which is approximately 10-30 %.

The first blossoming varies from three to twelve years according to the species during the propagation with seed. Reproduction of *Iris prilipkoana, I.carthaliniae* can be performed faster by the root division.

Studies of bio-ecological peculiarities of the experimental plants have revealed that in order of reproduction it is possible to divide them by the location and amount of renewal buds existing on the roots. Dividing the plants in autumn has a good result. The roots must be divided in the way that each divided one contained several buds. These kind of plants blossom much earlier (than those bred from the seeds). The first flowering begins in 2-3 years after the dividing, which is more profitable for ***ex situ*** and ***in situ*** conservation.

Almost all of the studied plants are rare, local, relict, and endemic species, included in the Red Book. At present, these species are reduced in number. These species passed through the long way of evolution to reach the present state and nowadays they are under the danger of extinction, as unfortunately, there are no appropriate steps taken to preserve and protect them. Thus, collection of fam. *Iridaceae* family species in Georgian National Botanical Garden is very important for *in situ* conservation, as it will contribute to the restoration of plant consistence and amount in their natural distribution area. It will also contribute to survival of endemic and relict species of Georgian flora under the conditions of ***ex situ*** conservation. It will allow us to maintain this valuable gene pool for the next generations.

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1122-1132, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

Economic Sciences

Экономические науки

UDC 33

Liability and the Relationship With Accounting Conservatism Among Companies Listed at Tehran Stock Exchange

Farideh Derakhshan

Islamic Azad University, Iran
Department of Accounting Sciences, Yasuj Branch

Abstract. The resent study aims at investigating the relationship between liability and accounting conservatism, while having in mind the primary goal of management as to maximize shareholders' wealth. Financial statements of 80 companies listed at Tehran Stock Exchange from 2006 to 2011 were analyzed. The companies in order to satisfy higher return should have adequate and appropriate financial resources, which are provided by using financial instruments such as liability and stock. Population of the study accounts for 80 companies listed at Tehran Stock Exchange, among which 68 were chosen through elimination sampling method. Hypotheses of the study were tested using multivariate regression model and T-test.
Keywords: conservatism; financing; liability.

Introduction

Decisions concerning the selection of financial instruments are those made foe gaining cash for investment and meeting financial needs. Companies can finance through liabilities and the equity. Financing through liability is optimal when interest expenses related to that liability are lower than the return of using cash from that liability. If a company gets a loan and faces shortage of cash upon loan maturity, it will be pushed to sell some part of its assets to pay off creditors, while it needs not to pay dividends for ordinary shareholders. A major advantage of financing from the equity is that the company is not bound to pay for ordinary shareholders. Conservatism is a feature of financial reporting, which, in a form of restrictive covenant in the framework of accounting principles and concepts plays a significant role in restricting optimistic behavior of managers, as information providers, and contributes to estimating the least return from investors and creditors, as users of information.

Statement of the problem

Conservatism is a concept of essential importance in accounting which is frequently used in providing financial information. As a restrictive covenant in accounting, conservatism is used for many years by accountants and, despite strong criticisms, still remains applicable among other accounting principles and assumptions. Conservatism is defined in the literature in two ways. First, Feltham and Ohlson (1995) define it as a bias in undermining book value of stock to market value. This definition looks at conservatism in terms of balance sheet, from which the measure of market value to book value $\left(\frac{M}{B}\right)$ is derived. Second, it is defined as an inclination to accelerate identification of losses and postponement of identifying gains, which indicates a loss and gain attitude, upon which Basu introduced asymmetric timeliness measure in 1997 (Price, 2005). [17]

Conservatism is an important contract in financial reporting that leads to cautious recognition and measurement of earnings and assets (Basu, 1997). Studies indicate that if a company is in need of external financing, it first releases the most reliable securities. Accordingly, companies primarily turn to debt and liability, and then try to exploit convertible bonds or common stock for financing. This study undertakes to study and explain dynamics of the relationship between financing through liability and conservatism in accounting.

Basu defines conservatism as "the accountant's tendency to require a higher degree of verification for recognizing good news in earnings than for bad news" (1997). Since annual returns of stock include news collected during the year, this definition affects the relationship between return-earnings. Using regression model of annual returns and earnings, Basu demonstrates that earnings response to negative returns (bad news) is greater and timelier than that for positive returns (good news). Basu called this different response of returns to good and bad news as asymmetry timeliness measure for conservatism (Roychowdhury & Watts, 2007). [18] In other words, asymmetry timeliness measure indicates that earnings' responses to negative return are faster and greater than good news (positive returns). Therefore, using Basu's measure it can be said the more asymmetry timeliness of earnings, the higher conservatism in financial reports. Companies in their competitions need external financing which serves as a facility for financing in the development of present banking system. However, only a minor part of financial resources are absorbed in the bank network. So a great effort should be dedicated to absorbing different financial resources and allocation of them to desirable tasks. Capital market is a place for financing long-term funds. Investors are primarily interested in increasing their wealth with the aim of investing in different companies, which is done through gaining returns (Jahankhani & Moradi, 1996). Companies use external and internal financing to expand and broaden their activities or to compensate for shortage of cash. Internal resources include cash flow from operation, cash from selling assets, and external resources include getting loans from financial markets and issuance of stock (Rahimian, 2002). [3]]

Four factors determine conservatism in financial reporting:

1. Arbitrary interpretation of conservatism
2. Judicial interpretation of conservatism
3. Legislative interpretation of conservatism
4. Tax interpretation of conservatism

The leading demand for conservative accounting arises from the role of accounting contracts (Watts, 2003). Stock and bonds issuance are used as financing instruments.

Significance of the study

Companies use long- and short-term financing and stock issuance for financing, each with its own advantages and disadvantages. If a company relies on higher levels of liability and causes a higher ratio of liability to rights of the equity, potentially it should gain more earnings than the time it didn't use external financing. If using this method raises company's earnings, shareholders will have higher amount of earnings with the same investment.

Based on preference theory, which emphasizes on financing performance of companies, it is suggested that companies prefer internal financing to external financing, and in the case stock issuance, they prefer debt securities to stock. This theory tells that the reason most of profitable companies use lower levels of liability is the fact that they provide their needs through internal resources. Therefore, they don't need external cash. On the other hand, companies with lower profitability level need debt securities in order to finance their activities because their internal resources are inadequate and make them rely on liability to meet their needs.

Objectives

Scientific objectives

This study aims at reaching the following objectives:

1. Determining level of conservatism according to their financing policies through liability
2. Deterring the relationship between level and type of financing through liability with conservatism in companies
3. Determining conservatism before financing with some changes in financing through liability
4. Determining conservatism after financing with some changes in financing through liability

Practical objective

The present study is performed to realize the following objectives:

1. Considering the high level and value of cement companies listed at Stock Exchange, and high level and value of medical companies at Tehran Stock exchange, it makes investors and shareholders pay due attention to effects of liability in these companies.
2. It makes Ministry of Economic Affairs and Finance pay due attention to effects of liability in tax savings in companies.
3. It helps banks in atoning credits to companies listed Tehran Stock Exchange (in particular cement and medical companies).
4. It introduces measures used for evaluating level of conservatism to be employed in Stock Exchange and the affiliated companies.

Review of literature

Ahmad et al. (2002) studied mutual relationship between conservatism and found that increase in conservatism employed in financial statements leads to decrease in financing expenses. [9]

Gul et al. (2002) studied the relationship between conservatism and auditing wages in Hong Kong. They stated that one of the results of decreasing conservative accounting is increase in auditing activities and wages. The authors showed a relationship between significant differences in conservatism during the period of economic stagnation (1996-1997) and economic prosperity (1994-1995) and auditing wages, using some sample companies listed at Hong Kong Stock Exchange. Observing companies listed at Hong Kong Stock Exchange for seven years, they demonstrated a reverse relationship between conservative accounting in each year and average auditing wages. [13]

In a study in 2003, Huijgen & Lubberink compared level of conservatism in earnings of companies listed at U.S Stock Exchange with earnings of English companies not listed at U.S Stock Exchange. They expected earnings English companies at U.S Stock Exchange to be more conservative than other companies. Two reasons are proposed for this.

1. These companies have lower shareholder legal claims in England.
2. Shareholders in U.S stock Exchange use high quality financial reports.

Study period covers the years between 1993 and 2002. They found that earnings of English companies listed at U.S Stock Exchange were more conservative than other English companies. Therefore, their findings in a way confirmed determining legal claims against conservatism.

Beekes (2004), confirming Ahmad and Duel-Man, claims that the presence of higher number of board of directors' out-of-duty members causes an increase in conservatism. [11]

Lara et al. (2005)," Accounting Conservatism and Corporate Governance", in a span of years between 1992 and 2003 and among American companies, used a synthetic measure for evaluating corporate governance and Basu measure in order to investigate conservatism. Their result showed a significant and positive relationship between the two. [16]

Ahmad and Duel-Man (2005), "The Role of Conservatism in Accounting on Corporate Governance", performed a study on 750 American companies from 19910 to 2001, using three types of measures to evaluate conservatism:

a. Givoly and Hayn's accumulated accruals measure (2000)
b. Beaver & Ryan's ratio of market value to book value (2000)
c. Asymmetry timeliness measure to earnings (1997)

The authors showed that:

1. There is a negative relationship between conservatism and share value of internal managers (chosen from among major shareholders and company owners).
2. There is a positive relationship between share value of external mangers and conservatism.
3. There is no significant relationship between number of board of directors and conservatism.
4. There is no significant relationship between investment ownership and conservatism. [10]

Mashmoul-Bonab (2005) conducted a research on current food industry in the years 1996 to 2001 to compare effects of financing through loan on earnings. Results showed an insignificant relationship between financing through loan and earnings of companies in food industry. This insignificance is justified based on the amount of using loan by food industries. Investigating companies in car industry, with 59% using loan for financing, confirmed the existence of a significant relationship between loan and earnings.

Bani-Mahd & Baghbani (2006) studied effects of accounting conservatism, state ownership, firm size and ratio of leverage on losses of 48 injured companies removed from the list of Tehran Stock Exchange from the years 1380 to 1386. Results showed that accounting conservatism has a direct relationship with company losses, which is theoretically accepted and are in agreement with results of studies conducted abroad. The study also emphasized on the existence of direct relationship between firm size and company losses, on the one hand, and a reverse relationship between ratio of leverage and company losses, on the other. Results of the study indicated that state ownership had no effect on company losses, and revealed that accounting conservatism can be an effective mechanism for limiting biased behavior of managers in exaggerating earnings of injured companies. So, they considered accounting conservatism as a factor improving injured corporate value in the long run. [2]

Shahriyari (2008), "Evaluating the Relationship between Political Costs and Conservatism in Companies Listed at Tehran Stock Exchange", used information for the years between 2002-2006 to investigate the relationship between conservatism with size, degree of concentration, systematic risk, investment intensity, effective tax rate, and centralized ownership and state ownership. Givoly and Hayn model was used to evaluate conservatism and it was concluded that there is a negative relationship between centralized ownership and conservatism, while there is positive relationship between state ownership and conservatism. [6]

Rezazadeh & Azad (2008), "Relationship between Information Asymmetry and Conservatism in Financial Reporting", studied on information related to a population of companies listed at Tehran Stock Exchange during the years between 2002 and 2006. Results of their study showed a positive significant relationship between information asymmetry among investors and level of conservatism employed in financial statements. Results also indicate that following the increase in information asymmetry among investors, demand for and application of conservatism in financial reporting increases. Thus, advantages of conservatism as a quality characteristic of financial statements are confirmed. [4]

Hypotheses

1. There is a relationship between conservatism and financing policies through liability.
2. There is a relationship between conservatism with level and type of financing through liability.

Subsidiary hypotheses

1. Conservatism in companies with greater change in financing is different from those with smaller change.
2. Conservatism in companies which have higher financing through stock issuance is different from companies with financing through liability.
3. There is a relationship between conservatism before and after financing with financing change through liability.

Methodology

Scientific studies are classified into three groups as regards their goals: fundamental, applied, research and development. Since the present study undertakes to study the relationship between financing through liability and accounting conservatism, and can be beneficial to large group of people including shareholders, researchers, and Stock managers, it can considered an applied work in this field, which utilizes regression method.

Givoly and Hayn model

Following Basu (1997), Givoly and Hayn (2000) investigated evolution of conservatism to answer the question that whether financial reporting has become more conservative or not. Relying on a particular definition, they used non-operating accruals to measure conservatism. Based on the this definition, conservatism is used in identifying a reporting financial events when mangers are first and foremost faced with ambiguity and lack certainty and are pushed to choose from among one or more options, and secondly, have to choose a method that results in the least possible amount of accumulated earnings. Givoly and Hayn used accruals and non-operating accruals because accrual accounting is a channel for applying conservatism, on the one hand, and applying managerial authority in the lack of certainty, on the other, paved the way for the emergence of conservatism. The sum of accruals and non-operating accruals is calculated as below:

$ACC_{i,t}= (NI_{i,t} +DEP_{i,t})-CFO_{i,t}$

$OACC_{i,t} = \Delta(AR_{i,t}+I_{i,t}+ PE_{i,t}) - \Delta (AP_{i,t}+ TP_{i,t})$

$NOACC_{i,t}=ACC_{i,t} - OACC_{i,t}$

Where

ACC is accumulated accruals, NI is net income before unexpected items, DEP is depreciation cost, CFO is cash fellow from operation, OACC is operating accruals, AR is accounts receivable, I is inventory of goods and materials, PE is prepayment, AP is accounts payable, TP is tax payable and NOACC is non-operating accruals. Non-operating accruals include amounts which are affected by management estimates and judgments. For instance, doubtful receivables increase in costs due to changing estimates, loss and gain of selling assets, loss cause by decreased value of inventory and fixed assets and transitional items to future periods. Givoly and Hayn calculated accruals as follows (Bani Mahd 1385, p. 720)

Conservatism index = $\frac{operating \ \ acruals \ \ before \ \ depriciation}{total \ \ assets \ \ at \ the \ beginning} \times (-1)$

In other words, operating accruals means working capital change without considering cash change.

Non-operating accruals = working capital change – cash change

Sum of accruals before depreciation= (depreciation + net earnings) – cash fellows yielded from operation

It should be considered that depreciation is a part of accruals, usually of long-term accruals. But Givoly and Hayn did not take depreciation into account in their study.

Non-operating accruals = sum of accruals before depreciation - operating accruals

Non-operating accruals are considered to be deposits for doubtful receivables, deposits stemming from losses caused by decreased assets value, inventory of goods and reconstructing costs. Conservatism index according to Givoly and Hayn model equals to) Bani-Mahd, 2006: p.73):

Conservatism index= cash flow from operation - $\frac{depreciation \ \ +earnings \ \ before \ \ unexpected \ \ item\,s}{totall \ \ assets \ \ at \ the \ beginning}$

The above index is used for measuring conservatism in the present study. [12]

Model of financing instruments through liability

Financing change through liability is one of the variables of the study which is measured using level of change in liability and level of change in stock. Balance sheet and cash transactions statement approaches are proposed for measuring these two variables. In balance sheet approach, change in financing through liability is calculated by the following model:

$\Delta XFIN_{BS} = \Delta EQUITY_{BS} + \Delta DEBT_{BS}$

$\Delta XFIN_{BS}$ =net change in financing

$\Delta DEBT_{BS}$ =level of change in rights of shareholders

ΔDET_{BS} =level of change in liability

Level of change in the rights of shareholders equals to level of change in ordinary stock from the year t-1 to t, which is calculated as:

$$\Delta EQUITY_{BS} = \frac{\Delta CEQUITY_{BS}}{PARVALUE}$$

$$\Delta CEQUITY_{BS} = CEQUITY_{t} - CEQITY_{t-1}$$

$CEQUITY_{t}$ = book value of the ordinary stock at the year t.

$CEQUITY_{t-1}$ = book valued of ordinary stock at the year t-1.

PAREVALUE = nominal value per share

Level of change in liability equals to level of change in short-term liability plus level of change in long-term liability, which is calculated as:

$$\Delta DEBT_{BS} = \Delta LTDEBT_{BS} + \Delta SHTDEBT_{BS}$$

$\Delta LTDEBT_{BS}$ = level of changes in long-term liability between the years t-1 and t, which is calculated by the following equation:

$$\Delta LTDEBT_{BS} = \Delta LTDEBT_{t} - LTDEBT_{t-1}$$

$\Delta SHTDEBT_{BS}$ = level of changes in long-term liability between the years t-1 and t, which is calculated by the above equation.

Population of the study covers all the companies listed at Tehran Stock Exchange, satisfying the following features:

1. All sample companies listed at Stock Exchange till 1383/12/29.
2. Their fiscal year end in Esfand.
3. They haven't changed their fiscal year during the research period.
4. They are listed as investing, helding, and financial mediating companies.
5. Their explanatory notes should be available.
6. At least, they have financed through either stock issuance or receiving liability.

Considering the above criteria, only 80 companies were sampled.

Results of testing hypotheses

The first hypothesis claims that conservatism has a direct relationship with financing through liability policies. To test the first hypothesis, the following model has been used:

$$CON_{i,t} = \alpha + \beta_1(Ltf_{i,t}) + \beta_2(Shtf_{i,t}) + \beta_3(Size_{i,t}) + \beta_4(Lev_{i,t}) + \varepsilon_{i,t}$$

T able 5.4. Results of testing hypothesis 1

variable	symbol	Coefficient (B)	t statistics	P-Value
Fixed value	**α**	0/079	0/539	0/590
Long-term financing	Ltf	1/221	3/003	0/003
Short-term financing	Shtf	1/176	1/061	0/290
Firm size	Size	-0/014	-1/176	0/241
leverage	Lev	0/015	0/853	0/394
Regression model	F statistics	P-Value	Durbin-Watson statistics)D-W(	Adjusted Coefficient of determination
	6/040	0/000	2/018	0/077 R^2 = 0/064= $AdjR^2$

Results of testing hypothesis 1 (Table 5.4) show a significant F statistics (0.000) which is lower than 5%. Accordingly, regression model is significant. Durbin-Watson statistics (2.018) lies between 1.5 and 2.5; therefore, there is no correlation between different parts of model error. Regarding high level of P-Value of t-statistics which is higher than acceptable error level, results show a positive and significant relationship between conservatism and long-term financing. On the other hand, considering high significance of t-statistics, results demonstrate no relationship between conservatism and short-term financing. Also, results reveal that there is no relationship between conservatism and control variables such as firm size and leverage. Coefficient of determination and adjusted coefficient of determination show that regression variables can explain only 7.7% of changes in dependent variable.

Results of testing hypothesis 2

Hypothesis 2 states that level and type financing through liability has a relationship with level of conservatism.

Level:

a. First subsidiary hypothesis is derived from second main hypothesis

Conservatism in companies with bigger financing changes is different from those with smaller financing changes. To test the first subsidiary hypothesis, companies were first classified into the two control and sample groups, taking the level into account:

Companies in which financing changes to total assets during the year T was bigger than 7% (sample companies).

Companies in which financing changes to total assets during the year T was smaller than 7% (sample companies).

Then, using t-test for the two independent populations (Table 6.4) the above hypothesis is tested:

Table 6.4: Testing subsidiary hypothesis 1 derived from second hypothesis

mean		variance Lopen test		Mean t-test	
big financing changes	Small financing changes	F-statistics	Significance level (P-Value)	t-statistics	Significance level (P-Value)
-0/066	-0/073	4/393	0/037	0/397	0/692

The value of F-statistics is 4.393 and its significance level is 0.037, which is lower than acceptable error level. Thus, the assumption of equality of variances is rejected. Therefore, independent t-test with adjusted degree of freedom has been used. T-statistics is 0.397 and significance level is 0.692, showing that there is no significant difference between the two groups. Results show that average of companies with more financing changes is lower than companies with smaller changes.

b. Second subsidiary derived from second main hypothesis

Conservatism in companies, which has more financing through stock issuance, is different from those financing from liability. To test the second subsidiary hypothesis, companies were first classified into the two control and sample groups, taking the level into account:

Companies in which financing changes through stock issuance is greater financing changes through liability $(\Delta EQUITY > \Delta DEBT)$ (sample companies).

Companies in which financing changes through stock issuance is smaller financing changes through liability (ΔEQUITY<ΔDEBT) (sample companies).

Then, using t-test for the two independent populations (Table 7.4) the above hypothesis is tested:

Table 7.4: Testing subsidiary hypothesis 2 derived from second hypothesis

mean		variance Lopen test		Mean t-test	
big financing changes	Small financing changes	F-statistics	Significance level (P-Value)	t-statistics	Significance level (P-Value)
-0/080	-0/054	3/694	0/045	-0/661	0/048

The value of F-statistics is 3.694 and its significance level is 0.045, which is lower than acceptable error level. Thus, the assumption of equality of variances is rejected. Therefore, independent t-test with adjusted degree of freedom has been used. T-statistics is -0.661 and significance level is 0.048, showing that there is a significant difference between averages of the two groups. Results show that accounting conservatism in control group companies is more than sample group. That is companies which their financing changes through stock issuance are lower than changes through liability.

Results of testing hypothesis 3

The third hypothesis states that conservatism before financing has a relationship with changes in financing through liability. The following model is used for testing the third hypothesis:

$$CON_{before} = \alpha + \beta_1(\Delta Xfin_{i,t}) + \beta_2(Size_{i,t}) + \beta_3(Lev_{i,t}) + \varepsilon_{i,t}$$

Results are given in Table 8.4.

Table 8.4: Results of testing the third hypothesis

variable	symbol	Coefficient (B)	t statistics	P-Value
Fixed value	α	0/075	0/563	0/574
Changes in financing through liability	(Δxfin)	9/247	2/808	0/005
Firm size	Size	-0/014	-1/286	0/199
leverage	Lev	0/018	0/917	0/360
Regression model	F statistics	P-Value	Durbin-Watson statistics)D-W(	Adjusted Coefficient of determination
	5/108	0/002	1/799	0/048 R^2 = 0/039= $AdjR^2$

Results of testing hypothesis 3 (Table 8.4) show a significant F statistics (0.002) which is lower than 5%. Accordingly, regression model is significant. Durbin-Watson statistics (1.799) lies between 1.5 and 2.5; therefore, there is no correlation between different parts of model error. Regarding low level of P-Value of t-statistics which is lower than acceptable error level, results show a positive and significant relationship between conservatism before financing and changes in financing through liability. Also, results reveal that there is no relationship between conservatism and control variables such as firm size and leverage. Coefficient of determination and adjusted coefficient of determination show that regression variables can explain only 5% of changes in dependent variable.

Results of testing hypothesis 4

The fourth hypothesis claims that conservatism after financing has a relationship with changes in financing through liability. The following model is used for testing the fourth hypothesis.

$$CON_{after} = \alpha + \beta_1(\Delta Xfin_{i,t}) + \beta_2(Size_{i,t}) + \beta_3(Lev_{i,t}) + \varepsilon_{i,t}$$

Results are given in Table 9.4.

Table 9.4: Results of testing the third hypothesis

variable	symbol	Coefficient (B)	t statistics	P-Value
Fixed value	α	-0/141	-0/874	0/383
Changes in financing through liability	(Δxfin)	6/429	1/566	0/119
Firm size	Size	0/003	0/238	0/812
leverage	Lev	0/038	1/761	0/080
Regression model	F statistics	P-Value	Durbin-Watson statistics)D-W(	Adjusted Coefficient of determination
	4/424	0/005	1/993	0/050 R^2 = 0/039= AdjR^2

Results of testing hypothesis 4 (Table 9.4) show a significant F statistics (0.005) which is lower than 5%. Accordingly, regression model is significant. Durbin-Watson statistics (1.993) lies between 1.5 and 2.5; therefore, there is no correlation between different parts of model error. Regarding high level of P-Value of t-statistics which is higher than acceptable error level, results show that there is no significant relationship between conservatism after financing and changes in financing through liability. Also, results reveal that there is no relationship between conservatism and control variables such as firm size and leverage. Coefficient of determination and adjusted coefficient of determination show that regression variables can explain only 5% of changes in dependent variable.

NO	Description		Results	
			Confirmed	Rejected
1	Conservatism has a relationship with policies of financing though liability		*	
2	level	Conservatism in companies with bigger changes in financing is different from those with smaller changes in financing		*
	type	Conservatism in companies with bigger changes in financing through stock issuance is different from those with bigger changes in financing through liability	*	
3	Conservatism before financing has a relationship with changes in financing through liability		*	
4	Conservatism after financing has a relationship with changes in financing through liability			*

Results and recommendations

This study investigated financing through liability with conservatism using multivariate regression. It used financial information of 80 companies for a period of 6 years from 2006 to 2011. Four hypotheses were proposed: First, conservatism has a relationship with policies of financing through liability which was tested by the model proposed by Givoly and Hayn. Results confirmed this relationship. Second hypothesis investigated the relationship between conservatism with level and type of financing through liability which ends in rejecting this relationship. The third hypothesis examines the relationship between conservatism before financing and changes in financing through liability that confirms the existence of such relationship. The fourth hypothesis examines the relationship between conservatism after financing and changes in financing through liability and rejects the existence of this relationship.

1. Investigating the relationship between conservatism and earnings management
2. Investigating the relationship between financing through liability and earnings management
3. Investigating the relationship between conservatism and costs of agency

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1133-1141, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

UDC 33

Studying the Association between Social Capital and Educations in Qom Tax Organization

[1] Gholamreza Jandaghi
[2] Zolfa Haghgooyan
[3] Maryam Mashayekhi

[1] University of Tehran, Iran
Ph.D. Professor, Faculty of Management and Accounting, Farabi Campus
[2] University of Tehran, Iran
Ph.D. Candidate, Faculty of Management and Accounting, Farabi Campus
[3] Payam Noor University, Iran
M.A., Faculty of Management

Abstract. Present paper studies relevant literature and the background of researches on social capital as well as the relationship between the aspects of social capital and educations. Education is measured by demographic questions. In these items, educations include associate of arts, bachelor, master and higher level. Likewise, the situation of social capital aspects was also studied. To measure the amount of social capital, a self-structured titled the relationship between social capitals and developing organizational learning capacity is used. The questionnaire was distributed among a 30-subject sample consisting of Qom Tax Organization employees to measure the validity. Chronbach's alpha value (0.93) indicates that the questioner enjoys needed validity. Then, the questionnaire was distributed among 86-subject sample of Qom Tax Organization employees. The findings from information analysis indicate that in selected organization, correlation coefficient is 0.254 between social capital and educations. Therefore, one can conclude there is a positive relationship between social capital and educations. The results for T-test indicate that social capital is desired status in social capital. Likewise, all components of social capital are in desired level.

Keywords: social capital; trust; common norms; cooperation and mutual assistance; collective integration and cohesion; sympathy; contribution; collective identity.

Problem description

In past decades, different economic theories are developed and have influenced over organizational performance. Such transformation leads into the conversion of traditional forms of tangible capitals (building and equipment) into new capitals (intangible assets). Such intangible capitals play a vital role in organizational development and growth. In contemporary literature, capital term has diverse usage. Such diverse consists of human capital, interactional capital, customer capital, intellectual capital and health capital. Recently, social capital is raised by social economists as the capacity which impacts on organizational performance (Brooks & Nafukho, 2006). On the basis of social capital attitude, it is not individual attributes critical for success; rather it is communicative network situation of an individual in the organization. It means that the situation of an individual in social networks determines individual's social capital which leads into different job results (Lin & Huang, 2005). The main issue in present research is that whether there is an association between social capital and educations in Tax Organization and also how is the situation of social capital in this organization?

Theoretical basics

Social capital definition

Scientists have provided different definitions on social capital. Storberg (2002) indicated that like human capital theory, there are various definitions on social capital in management, sociology and human resource literatures (Brooks & Nafukho, 2006). Blyler and Coff (2003) asserted that in management literature, social capital is seen in the view of utility while in sociology; it is seen in terms of benefits people acquire through relations with other people (Smedlund, 2008). Most scientists have defined social capital through the lens of social network perspective. Social network theory is based on the assumption that communicative networks generate value for their members since they allow them to achieve social resources inside the network. In social network terms, the amount of social capital determines that whether people who communicate with other individuals who have proper resources such information and financial supports can achieve a positive working situation or not (Lin & Huang, 2005). In practice, using social capital means that communicative networks are used to aid other people (Baker, 2007). Lin (2001) expressed that although there are numerous definitions on social capital, most scientists concur that social capital benefits both individuals and their enterprises (Brooks and Nafukho, 2006).

Social capital attempts to relate interpersonal social relationship and generating economic value. In the simplest definition, social capital definition is based on the idea in which social relations are valuable. According to Burt, social capital can be considered as a skill (Smedlund, 2008). Social capital is defined as the communicative network structure among people. In other words, social capital is the model of mutual relations between people (Lin & Huang, 2005). According to Putnam (1995), social capital points out collective values and tendencies originated from social networks (Goyal and Akhilesh, 2007). Social capital can be defined as a resource used in social networks (such as organization (Brooks & Nafukho, 2006). Social capital is collective merchandise and has no meaning alone; rather, it finds meaning in interactions between people (Smedlund, 2008). Social capital is an asset, resource and capacity emulated from trust, mutual relations, good will and knowledge among social networks (Glalbraith, Rodriguez & Stiles, 2007). Cohen and Pursak (2001) define social capital with such components as trust, mutual understanding, behaviors and common values (Brooks & Nafukho, 2006). In organizational studies, social capital can be conceived in unofficial structure (social structure beyond official hierarchy) (Smedlund, 2008). Goleman (1990) asserted that in social capital, social relations can be used to generate value. In contrary to organizational human capital and traditional assets, social capital is unique in terms of significant social relations for which people invest (Brooks & Nafukho, 2006).

The importance of social capital

Traditionally, three natural, physical and human capitals lead into economic development (Zhang & Fung, 2006). Physical capital refers to tangible and physical assets. Human capital points out employees' knowledge and skills (Mazlumi and Fathollah, 2007). It is certain today that these capitals yield to economic growth to some extent and the missed link is social capital. Studies in recent years show the importance of social capital in economic development. Acquiring social capital needs careful investment on cultural and economic resources (Zhang & Fung, 2006).

Social capital influences over economic performance of nations, regions, societies and companies (Smedlund, 2008) and creates the sense of cooperation, synergy and contribution among society's members (Nazaemzadeh, 2008). In national level social capital is an affecting factor on economic growth and development. Putnam (1993) explained that social capital impacts on governments' performance. To support his claim, Putnam mentioned the economic success by

Italian north region compared to southern region. In the level of companies and inside them, social capital has yielded to innovation and resource exchange. Studies indicate that social capital could yield to decrease in exchange costs, increase in cooperation, facilitate entrepreneurship and foster relations between suppliers and organizational learning (Zhang & Fung, 2006). For companies, social capital is both a resource and a value driving force. For instance, employees can communicate employees in other organizations and such communications can be seen as an asset (Smedlund, 2008). In individual level, social capital yields into job success and creating human capital (Zhang & Fung, 2006).

Social capital and life quality

Not only social capital is too interesting and important for business problems, but also there are more interesting and important reasons for learning how to use and develop social capital. Studies on medical psychology indicate that there is a direct link between social capital and quality, aim and concept of life (Baker, 2007).

Social capital relates to below variables:

1. Propensity: developing social networks would finally lead into propensity, growth, splendor, satisfaction and targeted life. Barton Hirish asserts: "social network is a concept more than finding strategies for problem solution" (Baker, 2007).
2. Wellness: people with good social networks enjoy better physical and spiritual wellness. The impacts of networks in enhancing the wellness are proved by numerous studies. These impacts can be categorized from decrease in the risk of suffering from serious illnesses to a simple cold (Baker, 2007).
3. Longer life: those people who enjoy proper social networks live longer. The link between networks and longer life is influenced by behavioral and technological changes. For instance, is broadly observed that attendance in religious ceremonies mitigates death which is to some extent due individuals' behavioral changes (Baker, 2007).

Background

In his studies, Burt (1997) found that managers with higher social capital are promoted rapider than managers with lower social capital. Seibert et al, (2001) found that social capital associates directly with job satisfaction and promotion. Studies indicate that social capital has a positive link with job results (Lin & Huang, 2005). Researches show social capital in people, groups, organizations and national levels would yield to increase in learning and sharing information and knowledge. In the meantime, studies suggest that social capital mitigates time and costs of information exchange, reworking and supervision and it would encourage cooperative behavior and building a creative organization (Goyal and Akhilesh, 2007). Studies indicate that social capital not only facilitate problem solution but also is considered as a valuable resource for collaboration with colleagues. In most cases, social capital leads into job promotion (Lin & Huang, 2005). The concept of social capital is necessary to conceive organizational dynamics, innovation and value generation. Those organizations whose members possess higher social capital are in proper situation to benefit opportunities. Researches indicate that social capital impacts on innovation, creativity, knowledge generation, mental capitals, knowledge sharing, team learning, success of a new product and creating competency (Goyal and Akhilesh, 2007). Studies indicate that social capital is the result of affective and cognitive function of social units. Affective and cognitive factors relate social capital and innovation processes (Goyal and Akhilesh, 2007). In a study titles "investigating the role of social capital in the relationship between human capital variables and job dynamism" in 2005, the results indicated that social capital play as mediating role in the relationship between human capital and human capabilities. Relevant data was gathered from 111 employees in three financial institutes in Taiwan (Lin & Huang, 2005). The results of a study on the relationship between social capital and performance in 3600 companies at 31 Chinese states in 2003 indicated that membership in different companies has no significant impact on the performance of Chinese private institutes. In the meantime, short term investment on social capital has a significant impact on companies' performance and it is seen as a determinant in their performance (Zhang & Fung, 2006). Reputation shows contribution and cooperation by an individual with other colleagues. Therefore, intra social network reputation reflects the extent of social capital. In their studies, Baldwin et al, (1997) indicated that a person with a critical role in social network is often able to gather information and practical solution for job problems (Lin & Huang, 2005).

Research aims

- Studying the relationship between social capital and educations of employees in Qom Tax Organization
- Studying the status of social capital aspects in selected organization
- Ranking social capital components in selected organization

Research general hypothesis

There is a relationship between social capital and educations.

Research special hypotheses

1. There is a relationship between trust and educations.
2. There is a relationship between common norms and educations.
3. There is a relationship between mutual cooperation and educations.
4. There is a relationship between collective integration and cohesion and educations.
5. There is a relationship between empathy and mutual respect/understanding and educations.
6. There is a relationship between contribution and educations.
7. There is a relationship between collective identity and educations.

Methodology, sampling method and sample volume

This is an applied research in terms of purpose while it is a descriptive (correlation) study in terms of method. Its population consists of employees (260) in Qom Tax Organization. By using a statistical equation, selected sample is 86 in 8% of error level.

$$n = \frac{N Z^2 S^2}{(N-1) d^2 + Z^2 S^2}$$

S2= 0.288

The demographical status is shown in table 1.

Table 1: Population's demographical status

Female	Male	Gender
24.4%	74.4%	

Missed data is 1.2%.

Single	Married	Marital status
10.5%	86%	

Missed data is 13.5%.

Masters and higher	Bachelor	Associate of arts	Diploma and lower	Educations
16.9%	12.8%	57%	29.1%	

Missed data is 1.2%.

15 – 20 years	10 – 15 years	5 – 10 years	- 5 years	Job experience
9.3%	16.3%	47.7%	25.6%	

Missed data is 1.2%.

In present study, a self – structured questionnaire devised by Mr. Vaziri is used. To assure whether questionnaire can really measure the relevant traits or not, he submitted it to some instructors in Qom Pardis, University of Tehran, as well as some experts and managers in Qom Agricultural Jihad Organization. He asked them (n=45) to share their opinions on the type, quantity and correlation of questions. Upon gathering their opinions, some changes were made in the questionnaire and then it was supported (Vazirirad, 2008: 123). Questionnaire reliability was achieved 0.93 in a 30-subject sample which indicates the reliability of the utilized questionnaire.

Social capital components

1. Trust

Social capital is an asset, resource and capacity acquired from trust, mutual relationship, good will and social networks (Glalbraith, Rodriguez & Stiles, 2007). Cohen and Pursak (2001) defined social capital with such components as trust, mutual understanding, behaviors and common norms (Brooks & Nafukho , 2006). Inglehart (1997) asserts that social capital is trust culture in which networks, wide communications and organizations are shaped voluntarily (Amiri & Rahmani, 2006). Anthony Gidner believes that trust is safety feeling which reassures an alone man in transferences, crises and possible dangers (Afshar, 2009). Researches indicate that where trust – based relations are in high levels, people are highly tended to social exchanges and collaborative interactions. Misztal says: "trust provides communication and dialogue" (Moshabaki and Qelichly, 2007). Alvani (2001) believes that public managers can overcome trust mitigation among people and aid the generation of social capital and trust climate through social responsibility feeling, cohesion and obligation to ethical principles (Amirkhani and Pourezat, 2008).

2. Common norms:

One of the most productive elements of social capital is common norms (Vazirirad, 2008: 32). Cohen and Pursak (2001) defined social capital as trust, mutual understanding, behaviors and common norms (Brooks & Nafukho , 2006). According to Putnam (1995), social capital refers to collective norms and tendencies originated from social networks (Goyal and Akhilesh, 2007).

3. Cooperation and mutual

Francis Fukuyama defines social capital as a set of unofficial norms and values shared by group members among them cooperation is allowed (Vazirirad, 2008: 35).

Cooperation was coined by Robert Owen against Competition. Then, social connoisseurs used it in different concepts and functions so that Cooperation Movement and even Cooperatism found special status in socio economic theories (Cooperation, Wikipedia).

4. Collective integration and correlation

According to Grucart, social capital is internal cultural and social integration, norms and values over interactions between people and entities in which such norms are designed. Social capital is like glue which guarantees the cohesion of societies and without it, no economic growth or human welfare is achieved (Vazirirad, 2008: 59).

5. Empathy and mutual respect and understanding

Empathy in social capital can be studied on ethical issues based on studies by Divian (Vazirirad, 2008: 57). Cohen and Pursak (2001) defined social capital by such components as trust, mutual understanding, behaviors and common norms (Brooks & Nafukho, 2006).

Empathy is to aware feelings, needs and interests of other people as below:

1. Recognizing others: conceiving others' feelings, priorities and aims;
2. Developing others: conceiving others' development needs and supporting their capabilities
3. Service – orientation: prediction. Identifying and supplying customers (others') needs;
4. The capability of penetration: using effective tactics to encourage others;
5. Public awareness: the capability to develop emotions and identifying power relations (Zarei Matin, 2008: 25).

6. Contribution

French sociologist, Burdeu asserts that social capital refers to communications and contribution of a society's members to realize the aims (Nazemzadeh, 2008). Social contribution refers to the category of willful activities by which the members of a society contribute in the affairs of neighborhood, city or village directly and indirectly and also in creating social life (Afshar, 2009).

The impacts and advantages of consultancy and advisory in Islamic view include: Contribution leads into using the capabilities of other individuals, mitigating mistakes in decision making, increasing empathy and friendship, enforces the morale of trust and self – belief and rises inner calmness and pleasure (Mirhashemi, 2006).

Concerning the advantages of consultancy, it seems that contribution is a logic response to today challenges and circumstances. An effective method for individuals' contribution in organizations is to use contributive management. Contributive management is a new motivational method in running manufacturing and service organizations effectively in both public and private sectors. Contributive management is based on the rationality that people contribute in decision making which impacts on their fates, have more independence in their deeds and make controls over their working life (McLegan and Nell, 1998: 47). Those managers who are responsible for decision making can take all the decisions alone but if they contribute others in decision making, they can use their ideas and would acquire more energy (Kjerulf, 2007).

7. Collective identity

Social capital includes all norms and values in intellectual, scientific, social and economic systems with such traits as mutual trust, social interaction and the feeling of collective identity (Afshar, 2009). One can consider social capital as the result of below phenomena in a social system: mutual trust, mutual social interaction, collective identity feeling, the feeling of a common image of the future and team working (Alavi, 2001). Identity is a process in which an individual feels that it is integrated with a group of other people (Moshabaki and Qelichly, 2007). Collective identity is a social – mental interaction created by an individual on himself/herself and deductions/expectations on adaptations and coordination (Vazirirad, 2008: 62). In their studies, Lewicki and Bunker show that a remarkable collective identity may not only increase the opportunities of information exchange but also it may raise the real frequency of cooperation among people (Moshabaki and Qelichly, 2007).

Data analysis

To analyze data, deductive statistic including Kolmogorov – Smirnov, single statistical population average, Spearman correlation coefficient and Freedman tests are used. To study the normality of research variables, Kolmogorov – Smirnov test is used. Based on results, significance ratio for social capital and its components is less than 0.05. Therefore, all research variables are normal. To study the status of social capital components, single population average test is used and the relevant results are shown in table 2.

Table 2: the status of social capital components

Average	Status	QTY	Variables
3.6416	Desired	68	social capital
3.3225	Desired	80	Trust
3.3157	Desired	83	Common norms
4.0264	Desired	84	Mutual cooperation
3.2707	Desired	82	Collective cohesion and integration
3.8529	Desired	85	Empathy and mutual conception
3.9789	Desired	83	Contribution
3.7708	Desired	84	Collective identity

To study hypotheses, Spearman correlation coefficient is used. Table 3 indicates correlation coefficients and significance ratio between social capital and educations. In these researches, educations are measured by demographic questions in the beginning of the questionnaire. The categorization of educations is based on associate of arts, masters and higher.

Table 3: correlation coefficients between social capital and educations

Sig	Correlation coefficient	Variables
0.717	0.041	Trust
0.048	0.219	Common norms
0.353	0.103	Mutual cooperation
0.1587	0.158	Collective cohesion and integration
0.009	0.285	Empathy and mutual conception
.0880	0.190	Contribution
0.164	0.154	Collective identity
0.037	0.254	Social capital

Correlation coefficient is 0.254 between social capital and educations. Since significance ratio is lesser than 0.05 (0.037), we conclude that there is a positive relationship between social capital and educations and the general hypothesis is supported.

By using EXCELL software, relevant diagram on the relationship between social capital and educations is drawn (diagram 1). It shows that more educations would increase social capital. The average of social capital of people with masters and higher is more than the social capital of people with bachelors. Likewise, the average of social capital of people with bachelors is greater than people with associate of arts.

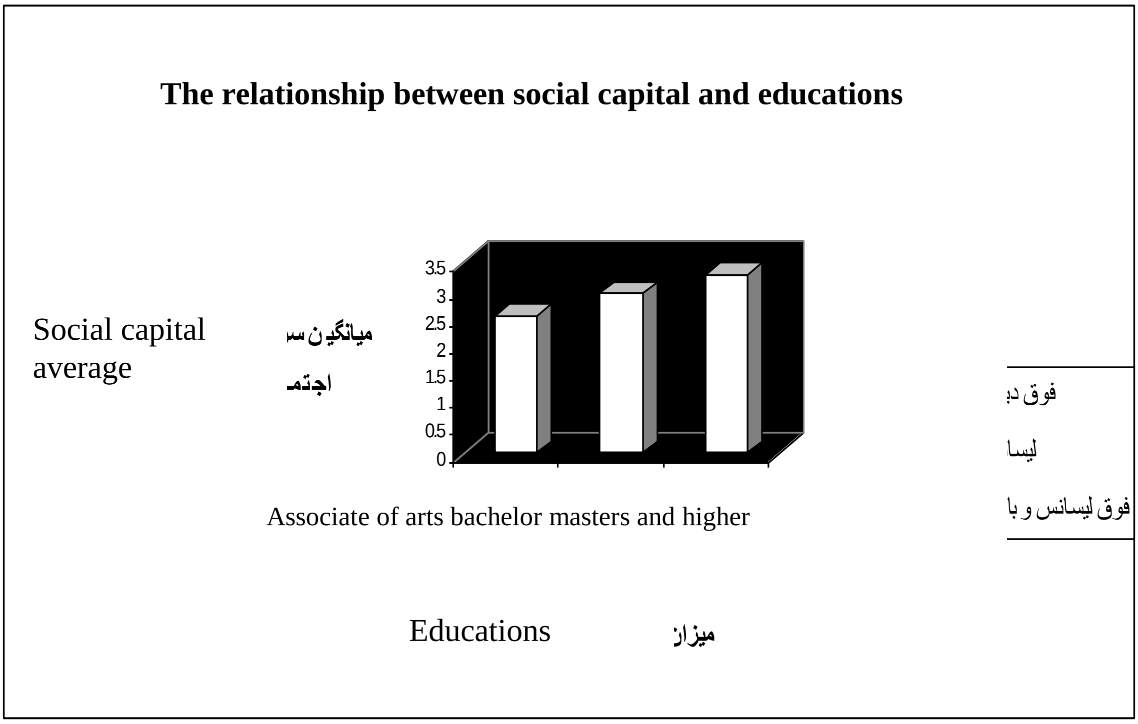

Diagram 1: the relationship between social capital and educations

Concerning special hypotheses, one can admire below results based on table 3:

1. There is no significant relationship between trust, mutual cooperation, collective integration and cohesion, contribution, collective identity and educations (in 5% as error level). Since Sig is greater than 0.05, hypotheses 1, 3, 4, 6 and 7 are not supported.

2. Since Sig for common norms and empathy is lesser than 0.05, hypotheses 2 and 5 are supported. Since correlation coefficient is positive, one can conclude that there is a significant and positive relationship between common norms and empathy and educations freedman test is used to rank social capital components. These components are shown in table 4 in order of priority.

Table 4: prioritizing social capital components

Ranks	Variables	Priority
5.30	Mutual cooperation	1
5.14	Contribution	2
4.99	Empathy and mutual conception	3
4.35	Collective identity	4
2.97	Trust	5
2.74	Common norms	6
2.51	Collective cohesion	7

Recommendations

1. Efforts to network and facilitate communications through utilizing IT and web social networks
2. Using new media such Internet and making Internet social network would facilitate the relations between different people and create a joint language and help their conceptions and finally achieving joint meanings.
3. Establishing open and clear communications, disseminating all organizational good and bad news, constant meetings and interactions of employees with different managerial level and employees' contribution in different affairs
4. Assigning authorities on planning and timetabling their affairs is the best way of trust building in organization since an individual considers him/her as an effective and accountable person who is interested in the future of organization.
5. Fostering affectionate intelligence and emotional intelligence in order to conceive the feelings in order to achieve constructive communications and collective concurrence (organizational intelligence)
6. Defining profitable communications, values and joint interests in the light of contributive contribution
7. Respecting human values and mutual respect

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1142-1154, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

UDC 33

Marketing Factors Affecting Leasing Selection in Bosnia and Herzegovina: Case Study on VB Leasing

[1] Almir Ljeskovica
[2] Mersid Poturak

[1] International Burch University, Bosnia and Herzegovina
Faculty of Economics, Management Department
Francuske revolucije b.b. 71200 Sarajevo
E-mail: almir.ljeskovica@hotmail.com
[2] International Burch University, Bosnia and Herzegovina
Faculty of Economics, Management Department
Francuske revolucije b.b. 71200 Sarajevo
E-mail: mpoturak@ibu.edu.ba

Abstract. In constantly changing environment all types of companies need some support from various types of funding institutions. Companies use their own resources to finance some projects or purchases but also take loans, mostly from banks to have additional support or in case of lack of money. Beside small, medium, as well as big companies, physical persons also use different types of financing to achieve their goals and fulfil their needs. Financing companies need to recognize the criteria on which prospective customers establish their financing selection decision. Planning a proper marketing strategy in order to attract new customers is of crucial importance in identifying these criteria. The main purpose of the study is to identify which factors affects people to choose leasing services. For data collection and analyse both, qualitative and quantitative study is conducted. Data for this study were collected through surveys delivered to 65 VB Leasing users from Sarajevo region. Out of 65, 57 useful responses were accepted for further analysis. Also interview was done with director of VB Leasing for qualitative study in order to get more insights in this topic. Findings of the study show what are the important factors for leasing selection and these information can support leasing managers in designing marketing strategies for perspective customers.
Keywords: Financing; Leasing; Marketing Factors; Customers.

Introduction

Developed marketing is now the starting point for the survival of leasing companies in a more and more competitive market. Task of strategic marketing is to direct the leasing organization to its action as fully adapted to the market environment. In this context, one of the main tasks for leasing managers is to identify the factors that will attract market segment which will take these factors in consideration when making key decisions leasing selection. Leasing companies must determine the needs of consumers in each market segment as well as how these consumers evaluate the strength of the leasing company compared to its competition.

The main purpose of this research paper is to find out which factors are playing important role in selecting leasing. For upcoming business people as well for present ones it is important to have better insight in financing itself, but also to know to which factors they should pay huge attention in selecting leasing services. This knowledge can help them to make better decisions and make some changes and improvements in their business.

Leasing as way of financing in this research paper is the main topic. Leasing is one of the high developing markets in Bosnia and Herzegovina and number of leasing houses is in increase. Guided by these facts this research will help to better understand leasing and provide knowledge and basis for next generations and researches. Leasing, by its nature, gives ability for companies to modernize their equipment at low cost and to improve their business. Furthermore procedure for getting leasing and collateral is much simpler than for credit.

VB Leasing is currently market leader according to many parameters in BH leasing market. They have recognized real needs of clients and implemented some changes but also developed new products in order to have satisfied, coming back client but also to attract new ones by many action programs. That is why VBL clients from Sarajevo region were selected as a sample for this study.

In following section comprehensive literature review on leasing and factors that are affecting leasing selection will be provided. Methodology section explains two ways of obtaining primary data used for the purposes of this research. Also, the Research questions of study were developed in that part. In data analysis and discussion section of this study, findings of surveys analyses and in-depth interview will be presented. Each finding is discussed, elaborated and explained. At the end of the chapter, research questions are tested. Finally, conclusion section gives us short overview of the whole study, and different suggestions for practitioners and future research.

Literature Review

1. History of Leasing and Definitions

As it is stated on official web page of Central Bank of B&H(“Central Bank of Bosnia and Herzegovina,” 2013), leasing has its roots long time ago; even in 2000 BC there were some forms of leasing. But leasing in its today’s form appeared in USA in 1950s. After couple of years a lot of countries in Europe started to use this type of financing. It took some 2 decades for leasing to be presented in slow emerging markets, but after middle of 1970s it is globally presented way of financing.

In Bosnia and Herzegovina leasing has started to develop from 2001. From information gathered at the official web page of the Central Bank of B&H, we see that in 2005 leading leasing companies founded the *Association of Leasing Companies*. Aim of this Association is improving operations and stimulation for development of the lease market. The main goals of the Association also include connecting members to improve leasing services in B&H, exchange experiences, and promote leasing through newsletters and publications, study and monitor developments, launch initiatives with the appropriate bodies to amend legislation, represent the Association at international meetings, and cooperate with similar organizations. In Bosnia and Herzegovina, due to fact of two entities, leasing activities are regulated by two laws: ‘The Law on Leasing of the Federation of Bosnia and Herzegovina' (FBiH), and ‘The Law on Leasing on the Republika Srpska' (RS). Leasing companies are monitored and licensed by the banking agencies of the FBiH and the RS. Leasing services can also be provided by banks. “The minimum amount of equity required to establish a leasing company is 250,000 KM.”(“Zakon o leasingu Federacije BIH,” 2008)

Leasing has become a widely used as an alternative form of financing. It offers the client simplified procedures, provides good collateral and reduced risk. Another important advantage for the client is that lease instalments involve only material costs. There are cost and tax saving opportunities that can compensate for the higher costs involved in leasing, compared to bank loans.

The term “lease” is an English word denoting charter or rent. Leasing is an alternative finance model in which use, and not ownership, of the property is crucial: the philosophy of lease originates from an idea of using an investment in a profitable manner and with a flexible payment plan.

“Leasing is a financial contract that allows the separation of ownership and use of an asset“(Lin *et al.* 2013). There are many somehow different definitions of leasing. But at the end, again they are all same and have same philosophy. According to Central Bank of B&H (“Central

Bank of Bosnia and Herzegovina," 2013) lease is an agreement by which the lessor transmits to the lessee, in return for monthly payments, the right to use a leasing object for a certain period of time which is stated in contract.

"A lease is a contractual agreement providing the use but not ownership of a piece of equipment. Two parties involving in the contract are lessor and lessee. The lessor holds the title to the equipment and provides the lessee with the use of equipment, while the lessee uses the equipment for a specific period of time and pays rent to the lessor"(Yan 2002).

"Leasing is a contract through which someone uses equipment owned by somebody else. The user (*the lessee*) pays specific regular amounts to the owner (*the lessor*)"(Deelen, Dupleich, Othieno, Wakelin, & Berold, 2003).

Leasing has its roots and implications in Islamic banking. Islamic banking is strictly defined by Shariah and by that side is accepted also in east countries where state laws are indeed Shariah. In Arabic, the word "ijarah" means "to give something on rent". From Islamic point of view also leasing can be explained: "Ijarah (leasing) refers to an arrangement in which a bank (the lessor) leases equipment, a building, or other facilities to a client (the lessee) at an agreed upon rental fee and for a specified duration. Ownership of the equipment remains in the hands of the lessor. In leasing arrangements, the bank purchases a durable asset and leases it to the customer in return for regular payments that reflect the cost of holding and maintaining the asset" (Shanmugam and Zahari 2009).

From previous definitions we can conclude that leasing is contractual agreement between two parties, lessor (owner of the assets) and lessee (user of assets). In essence, the leasing company buys the equipment and pays the supplier. Purchased equipment previously chose the lessee and it was taken to rent from leasing companies for agreed monthly instalments. Because the lessor remains the owner of the asset, leasing is a form of secured borrowing. Furthermore, leasing allows sharing of the risk with the lessor, it is less risky to lease an asset than to buy it and have ownership over it. By seeing all this before we can easily conclude that in the business of leasing there are three participants:

1. Dealer or manufacturer of equipment
2. Leasing company, which buys equipment from the manufacturer or dealer of equipment
3. User of leasing, which takes equipment to rent or lease.

Leasing as a form of financing gives companies ability to modern their equipment, improve their efficiency and to get competitive advantage. By each day passed, small and medium companies and organizations, and not just start-up companies, increasingly manage their growth through this form of financing.

"Today, leasing is a very widespread occurrence of the proved effects, and it is offered to transition countries as a significant relief in financing the procurement of investment equipment"(Gajić *et al*, 2010).

2. Justification of Leasing Usage and Marketing Factors Affecting Leasing Selection

Referring to literature from Vujić (2010), justification of leasing usage can be viewed from at least three aspects:

1) Aspect of leasing company;
2) Aspect of lessee;
3) Aspect of the overall society.

Leasing company for the excuse in developing this business sees in marketing philosophy. Through that philosophy, company makes research and finds that current and potential clients have a need for a new machines, cars, equipment etc., but they have lack of the financial resources with which they would buy needed equipment. Leasing company offers solution in financing of that equipment whereby company realize both fundamental principles of marketing:

- Satisfies customer's need through leasing service and
- Achieves profitable business.

From the aspect of leasing user, justification stems from basic goal to acquire needed asset and equipment with a relatively small burden and a fast and efficient realization of procurement. For most of the users, leasing is only possible way of financing because they do not meet strict credit requirements of commercial banks. Additional guarantee on form of hypothec is hard and irresolvable problem. Those guarantees are more simple in leasing business because usually leasing object is that guarantee and there is no need for some additional guarantees.

Justification of leasing usage from the aspect of overall society lies in fact that technological progress and increase in productivity realize through acquisition of new equipment. In fact that leasing companies employee many work force, pay taxes to the government and other legal obligations with support of total technological improvement in leasing users, leasing as a form of financing gets support and justification from the aspect of overall society.

Economy of one society becomes more competitive on global market and that represents the real and sustainable development and stability of one country and society. Thus, all three parties (leasing company, dealer/manufacturer, and lessee) find significant interest for development of this business through it they achieve goals of their existence and development.

Whether to use leasing also depends on different elements and circumstances in which possible client is in. Also there is great number of factors that will influence to select leasing financing. Some of those factors play important roles for persons when deciding if to use leasing financing. The best (if only price is taken in consideration) is to buy asset by the use of own resources. However, often potential clients do not have enough or do not have any funds and so they need to use leasing or some other source of financing. Vujić (2010) in his doctorial dissertation explored following elements and factors that should be taken into consideration when person has possibility to choose leasing or bank credit:

- *Speeds of an approval* **-** Requests are much faster approved in leasing companies than in banks. Under this criterion advantage is on the side of leasing companies.
- *The request procedures and approval speed* – In this case also leasing companies have an advantage. They have considerably simplified procedures for request application and approval speed is in short time. In contrast, banks require numerous documents and their procedures are complex.
- *Guarantee of repayment* – Banks ask for additional guarantees for repayment (hypothec) whose value should be bigger up to two times than amount of credit. Leasing companies use their ownership of the equipment as a guarantee and usually additional guarantees are not needed.
- *The interest rate* – In this element banks have an advantage because their interest rate is usually lower. But because of increased competitiveness in leasing market, most of the companies had to reduce amounts of interest rate so now banks' and leases' interest rates are not so much different.
- *Ownership* – In this case we have three solutions:

1. By using credit, ownership of equipment is immediately on credit user as well as all obligations and rights (amortization increases, cost of business increases, assets of the company increases, borrowings increases);
2. In case of operating leasing ownership never passes to the user so there is no increase in borrowings and no costs of amortization but there are just expenses of rent of used equipment (full instalment represents the rent expense);
3. In case of financial leasing ownership of used equipment passes to the lessee at the end of leasing period which is stated in lease contract. There are same rights, obligations and expenses as in credit.

- *Amortization expenses* – By using credit and financial leasing user is required by getting the equipment to immediately start calculating amortization costs, which increase costs of doing business. In contrast, by using operating leasing there are no amortization costs but there are rent costs (monthly instalments for leasing).
- *Creditworthiness of user* – In case of using bank credit creditworthiness of user is deteriorated because level of borrowings is increased, while that is not case in usage of leasing.
- *Technological development* – Through using of leasing technological improvement is easier. Acquisition of new and change of old equipment is faster and simpler through usage of leasing. By using credit user much harder changes equipment because of difficulty to get rid of old unfashionable equipment, and approval of new arrangements due to creditworthiness.

Factors that may affect leasing selection are also stated by many other researchers. For purposes of his research, Gallardo (1997) highlights some of the main factors that can influence leasing selection:

- *Availability* - In most developing countries leasing may be the only form of medium- to long-term financing available for purchase of equipment that can expand production levels or increase productivity of workers.
- *Simpler security arrangements* - In combination with less stringent requirements for historical balance sheets mean that new small and microenterprises can access lease finance more easily than bank loans.
- *Leasing can be arranged more quickly and simply than bank loans* - Additional security often does not need to be established. The costs of assigning additional collateral, documentation and processing times for bank loans can be significant (since these are typically fixed and not related to the size of the loan), and usually offset the higher spreads in leasing.
- *Tax incentives are available through lease financing* - Lessees can offset their full lease payments against income before tax, compared to the depreciation allowance or the interest charges on bank loans.
- *For the lessee the chief advantage that lease financing presents is a significantly lower discounted present value of cash disbursements over the term of the lease compared to the discounted present value of payments associated with bank-financed acquisition of an asset* - The reason is that the aggregate periodic lease rental payments, which are a combination of interest-related financing costs and payments against principal, can be booked by the lessee as a business expense to shield against tax liability on income realized. The asset financed through a lease is depreciated over the life of the lease, a period shorter than its economic life.

Central Bank of Bosnia and Herzegovina reserved one part of its web page to elaborate pros and cones of leasing. “With leasing, the individual also benefits from the simple approval procedure, with no need for additional guarantors. The opportunity cost is reflected in the VAT on interest and the comprehensive vehicle insurance usually mandatory during the lease term”(“Central Bank of Bosnia and Herzegovina,” 2013). Besides that, on CBBH web page there is stated that leasing is similar to bank loans, except for the ownership of the subject. “The choice between these options will depend on interest rates and collateral requirements (banks are usually more demanding in assessing credit rating and require additional security in the form of mortgages, etc.)”(“Central Bank of Bosnia and Herzegovina,” 2013).

From previous paragraphs it is apparent that leasing services have a number of benefits for users of this type of service. However, each user considers all circumstances from his/her own perspective and bring decision alone, whether to use leasing or credit. The fact is from year to year total volume of leasing financing markers high growth in Bosnia and Herzegovina.

3. Case Study on VB Leasing BH

VB Leasing BH is a leasing company which has been operating since 2001. Thanks to support and experience of owner, Volksbank Leasing International Holding of Vienna, as well as good cooperation between our employees and business partners and clients, VB Leasing has proved itself to be a reliable company with straightforward transparent offers and clear calculations. Besides the head office in Sarajevo, VB Leasing has branches in Mostar, Tuzla, Banja Luka and Tešanj.

VB Leasing has been operating successfully in the market in B&H for ten years. Company has a transparent, open and fair relationship with clients, a quick and simple procedure, and clear offers which make them leaders in the BH marketplace.

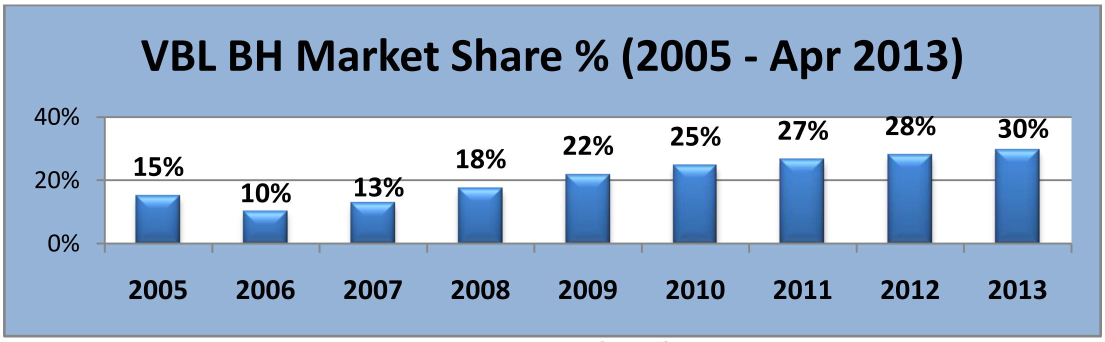

Figure 0-1 VBL Market Share Percentage
("VB Leasing," 2013)

Besides the financing of personal vehicles and trucks, VBL also offers financing of construction machines, medical and other equipment as well as all forms of movable property. Flexible offers provide a financial solution adaptable to each client's needs, and what characterizes VB Leasing in particular is the speed of application processing and financing without guarantors. VB Leasing is the company which is devoted to customers. Besides basic service, which is more or less provided by other leasing companies, we differentiate ourselves through the things we recognize as a need and we add it in package together with the main service.

Success and development of VBL we can see best through the fact that during 2007 they were on fourth place with 13% of market share while today it is totally different. Now VBL is the market leaders with more than 30% of market share, in accordance to all valid parameters. According to the fact that during 2013 VBL achieved the greatest number of signed contracts of all leasing companies and from beginning of 2014 VB Leasing signed 110 new contracts, we can see that they are settled down as a company of trust.

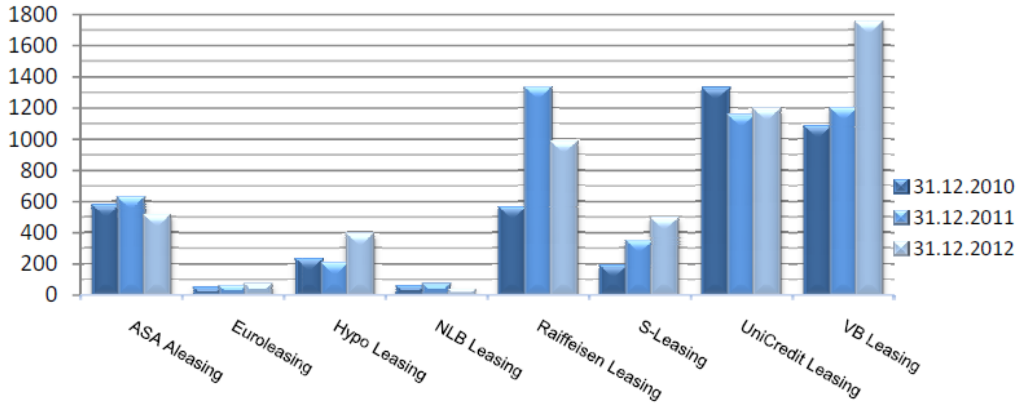

Figure 0-2 Growth According to Number of Contracts
(Agencija za bankarstvo, 2014)

Although VBL achieved certain competitive advantage, they are still stubborn in intentions to keep their present good position and satisfied customers. Even though that VB Leasing reached number of 1700 signed contracts which is far away from their first follower, VBL introduced innovations in form of "E@syLeasing". This product lies on agreement between VBL and dealers (cars, machines, trucks, buses, equipment etc.). Agreement is that when potential customer comes into saloon looking for particular asset, dealer offers him/her financing through VB Leasing with all advantages of using it. Then dealer sends personal data of customer to the VBL and in 2 hours a request can be approved. After that lessee (customer) and VBL signs contract, VBL pays to the dealer while lessee pays instalments to the Volksbank Leasing.

In the market of leasing services, VB Leasing is allocated over the competition through good business relationships with dealers, as indispensable factors in the process of upgrading of indirect sales. By training the sales staff of dealers, VB Leasing aims to create long-term competitive advantage. In the retailers' premises VBL installed a special application which is run by the sales staff.

"E@SY LEASING - FORMULA FOR THE FASTEST LEASING" is an application and a product of VB Leasing with two modules: B2B - B2C and module - module. All modules together form a unit which is interconnected and interrelated"(Jahić, 2013). A set of interface module is connected to the main application VB Leasing (core system). This system is designed exclusively for registered users (sellers). Administration of the system is performed through a list of codes in the main application, and access to the administrative part is only provided to persons with special privileges, to thereby avoid possible abuses. Each group of retailers has the VBL person who follows what the sellers of these groups are working with the offer, so it has access to all the actions that each user has made. Documents in pdf format are sent via e-mail.

As Jahić (2013) stated in his master thesis, E@SY LEASING allows retailers to use the internet for delivering to VB Leasing document in pdf format and by that way VB Leasing has priority when submitting bids. Immediately by the use of internet leasing agreement can be approved.

Methodology

With the aim of doing primary research we collected data and information on two ways. Quantitative and qualitative research was done. For quantitative research, survey was developed distributed to VB Leasing's clients from Sarajevo region. and for qualitative research, in-depth interview with director of VB Leasing was done. For the purpose of getting leasing users' opinion regarding marketing factors that were important to them in selecting leasing services, questionnaire was developed. "Method of survey is process by which on the basis of questionnaire data, information, attitudes and opinions are explored and collected about the subject of research"(Zelenika, 2000). Questionnaire was descriptive. By the questionnaire person's demographics, satisfaction and opinion were examined. Survey was contained of twenty questions. First part of survey was consisted of two demographic questions (marital status and type of employment). Also respondents were asked to state between how many leasing companies they were deciding when choosing leasing. Second part was consisted of five satisfaction questions where examinees were asked about how satisfied they are with leasing company. The last, but the most important part of questionnaire was about examining which of twelve listed marketing factors were most important for leasing users in selecting leasing services.

Survey was done in period from December 2013 until May 2014. In that period in Sarajevo region VB Leasing made contract with sixty five (65) new clients (physical persons) and survey was done with those clients. Surveys were passed personally. Out of those sixty five surveys, eight were taken into considerations due to certain mistakes in fulfilling so in consideration and for further analysis was taken fifty seven (57) responds. Example of questionnaire is added to appendices part of this thesis. Data were analyzed in SPSS program 18th version.

Beside questionnaire, also in-depth interview with PhD Slobodan Vujić, director of VB Leasing was conducted. "Interview is oral survey"(Zelenika, 2000). Interview was done at the premises of VB Leasing, in director's office in Unitic Centre, B block 7th floor. Interview was an "individual interview. It has a numerous advantages to group interview, because, by the experience more quality answers are obtained"(Zelenika, 2000). Mr. Vujić was asked to evaluate twelve marketing factors that influence leasing selection, but from the perspective of the company. Also, Mr. Vujić was kind so he also explained why each of these twelve factors is important.

Research questions developed to be tested through this research are as follow:

- *RQ1 "Marketing factors that will be the most important in selecting leasing are: 1) Professionalism and credibility of company personnel; 2) Form simplicity; 3) Service quality; 4) Company image"*
- *RQ2 "Marketing factors that will play important role in selecting leasing are: 1) Grace period; 2) Processing speed; 3) Amount of interest; 4) Amount of cash participation"*

• *RQ3 "Marketing factors that are not so important in leasing selection are: 1) Amount Annuity; 2) Repayment length; 3) Lower participation and higher interest; 4) Lower interest and higher participation".*

In following section we will analyze all collected data and information from survey and in-depth interview with the aim and purpose of testing three above mentioned research questions.

Data Analysis and Discussion

In previous section we described how research was done, what questions it was consisted of and how it was delivered. Also we mentioned that in-depth interview was conducted. After that, now we are proceeding to see the results of questionnaire and to discus about them.

Table 0-1: Marital Status of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Single	18	31.6	31.6	31.6
Married	39	68.4	68.4	100.0
Total	57	100.0	100.0	

For getting insight of what is the marital status of lessees, frequency statistics were used. It gave us percentages of single and married users of VB Leasing. From the table above (4-1 Marital Status) we can see that out of 57 respondents, 39 of them (68.4%) are married and 18 (31.6%) are single. It is obvious that more married persons are deciding to use leasing services than single persons. In the future it can be examined what is reason for that. Also companies can take action programs to involve more single persons to use leasing type of financing.

Table 0-2: Employment Status of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Employed in own company	12	21.1	21.1	21.1
Employed in someone's private company	39	68.4	68.4	89.5
Employed in public company	3	5.3	5.3	94.7
Retired	1	1.8	1.8	96.5
Unemployed	2	3.5	3.5	100.0
Total	57	100.0	100.0	

Table 4-2 Employment Status shows us in which type of employment are involved respondents. In this analysis we also used frequency statistics to get percentages of each employment status. Most of examinees, 39 out of 57 which make 68.4%, are employed in someone's private company. There are twelve (21.1%) respondents who are employed in their own private company. Just three out of 57 examinees are employed in public company, which is only 5.3%. There are only two leasing users that are not employed (3.5%) and only one retired person uses leasing services (1.8%). As we see from results, physical persons that are employed in someone else's company prefer leasing financing then persons which have different employment status. Reason for that can be that they have lower amount of cash (in comparison to persons employed in own companies) to be able to buy car or other equipment directly. To acquire certain equipment they go to leasing companies, use that object and pay monthly instalments.

Table 0-3: Choosing Between Companies

	Frequency	Percent	Valid Percent	Cumulative Percent
One	17	29.8	29.8	29.8
Two	22	38.6	38.6	68.4
Three	7	12.3	12.3	80.7
Four	5	8.8	8.8	89.5
Five and more	6	10.5	10.5	100.0
Total	57	100.0	100.0	

From Table 4-3 above we can see between how many leasing companies leasing users were deciding. Frequency statistics were used to have insight in percentages of each answer responded by examinees. Most of respondents had dilemma between two leasing companies. That dilemma had 22 examinees or 38.6% of all respondents. Seventeen respondents had no dilemma, 29.8% of examinees did not take in consideration other but one company. Between three leasing companies were choosing seven (12.3%) of respondents. Just five out of 57 respondents were deciding between four leasing companies what makes 8.8% of total number of examinees. Six examinees or 10.5% were taking in consideration five or even more leasing companies when they were about to use leasing services. As we see from table, leasing users were mostly choosing between two leasing companies.

Table 0-4: Satisfaction with Leasing Company

	N	Minimum	Maximum	Mean	Std. Deviation
Form Simplicity	57	2	5	4.19	.915
Procedure Speed	57	2	5	4.14	.895
Help During Application	57	2	5	4.02	.935
Kindness of Personnel	57	2	5	3.93	.961
Additional Services	57	2	5	3.96	.999
Valid N (listwise)	57				

Table 4-4 shows us lessees' satisfaction with business done through leasing company. Descriptive statistics were used in this analysis. When respondents were asked to express their satisfaction with leasing company they could select on the scale from 1 (disappointed) to 5 (extremely satisfied). From table above we see that all of the examinees are pretty satisfied with leasing company and business with it. For each of the factors seen from the table, the lowest answer was two (2) and maximum was five (5). Through this question five elements were examined and all of them have mean value greater than three (3) which is considered as neutral. As we can see, leasing users were mostly satisfied by form simplicity (mean value 4.19) they had to fulfil. This can be useful information for companies that have a little bit more complicated forms. Those companies should simplify them and they will probably have more satisfied clients. Mean values of other factors indicate us also lessees are generally very satisfied with service they've got from leasing company. The lowest of all mean values was one for kindness of personnel even though it is pretty high (3.93). According to this, managers of leasing companies should train and request from employees which are in direct contact with clients to behave more politely in order to have satisfied client who will starve to come back and use service again.

Table 0-5: Factors That Affect Leasing Selection

		Minimum	Maximum	Mean	Std. Deviation
Repayment Length	7	2	5	3.91	1.023
Amount of Cash Participation	7	1	5	4.26	1.078
Low Participation High Instalment	7	1	5	3.89	.958
Low Instalment High Participation	7	1	5	3.40	1.266
Service Quality	7	3	5	4.67	.546
Processing Speed	7	3	5	4.35	.813
Form Simplicity	7	3	5	4.39	.701
Company Image	7	3	5	4.46	.709
Amount of Interest	7	3	5	4.07	.842
Professionalism and Credibility of Company Personnel	7	4	5	4.86	.350
Amount of Annuity	7	2	5	4.07	.923
Grace Period	7	1	5	1.82	1.325
Valid N (listwise)	7				

Table from above (Table 4-5) shows us examinees opinions regarding each of twelve factors that are listed as important. Research done on these twelve factors is the main question of the research and the most important part of survey through which we want to examine our three Research questions and accept or reject them. For analysing this question we used descriptive statistics. If we sort mentioned factors according to their mean ranking from the highest to the lowest it will look as follows (mean value is in bracket):

1. Professionalism and Credibility of Company Personnel (4.86)
2. Service Quality (4.67)
3. Company Image (4.46)
4. Form Simplicity (4.39)
5. Processing Speed (4.35)
6. Amount of Cash Participation (4.26)
7. Amount of Interest (4.07)
8. Amount of Annuity (4.07)
9. Repayment Length (3.91)
10. Low Participation High Instalment (3.89)
11. Low Instalment High Participation (3.40)
12. Grace Period (1.82)

List above gives us easy opportunity to check our research questions. Following paragraphs will be dedicated for analysing our three research questions.

• *RQ1 "Marketing factors that will be the most important in selecting leasing are: 1) Professionalism and credibility of company personnel; 2) Form simplicity; 3) Service quality; 4) Company image".*

According to research question, RQ1 and brief look on the list and the table, we can easily conclude that RQ1 is completely accepted. We can say that marketing factors that will be the most important in selecting leasing are: professionalism and credibility of company personnel, form simplicity, service quality and company image. Each of the four factors that were considered as important, are also proved as important by respondents in survey. According to lessees these factors are very important as evidenced by the lowest answer three (3), the highest maximum of five (5). Also means for these four factors are very high (lowest 4.39) which gives us clear picture and evidence that users of leasing pay huge attention to these factors. Leasing companies in order to gain bigger number of clients but also to keep existing ones should pay attention to have simplified forms, to make good company image, to improve their service quality and also to have well educated personnel. Beside answers from survey, we also have interview with Mr.Vujić. He as a director of VBL also shares opinion of the lessees and gives high marks for each of these factors. Additional information and explanation of his answers can be found in appendices part of this work.

• *RQ2"Marketing factors that will play important role in selecting leasing are: 1) Grace period; 2) Processing speed; 3) Amount of interest; 4) Amount of cash participation".*

Unlike RQ1 where we accepted it in total, it is not case with RQ2. If we take a look on the table 4-5, we can see not all factors are important as considered to be. Out of four factors that are considered as important in leasing selection, one of them is much less important. Three factors (processing speed, amount of interest and amount of cash participation) are important for users when selecting leasing services. They will pay attention to those three factors which is easily apparent if we take a look on their mean values (4.35, 4.26 and 4.07). Mean value for factor of grace period is very low (1.82) and it is lowest from all twelve factors. Also Mr.Vujić in considers processing speed as important as well as amount of interest giving them marks 5 and 4 respectively. Amount of cash participation in his opinion is neutral, grading it with mark 3. In his opinion grace period is somehow important (mark 3) what is not case with respondents and leasing users. We can conclude that even if grace period is considered as unimportant by lessees, leasing companies should not neglect it. Also leasing companies can work more and improve their processing speed of requests as well as to find optimum level for each client in deciding and setting interest rate and amount of cash participation. By taking in consideration these facts, we can partially accept RQ2 and say that marketing factors which will play important role in selecting leasing are: processing speed, amount of interest and mount of cash participation while grace period will not play so important role.

• *RQ3 "Marketing factors that are not so important in leasing selection are: 1) Amount Annuity; 2) Repayment length; 3) Lower participation and higher interest; 4) Lower interest and higher participation".*

Third research question, RQ3, contains four factors that are considered as not so important for clients in selecting leasing. By doing research (survey) and making analysis, we found that out of these four factors, examinees agreed with us on three of them (repayment length, lower participation and higher interest, lower interest and higher participation). Their opinion is different when we talk about amount of annuity. They consider it as more important factor than other three. Table 4-5 shows to us mean values for each of these factors and according to that we can make decision. Same as RQ2, also R3 will be partially accepted. We can say that marketing factors which somehow are not so important in leasing selection are: repayment length, lower participation and higher interest, lower interest and higher participation while amount of annuity is considered as important. Also, in the interview Mr. Vujić graded amount of annuity with mark 4, which indicates that it is important and also that he as a director of leasing company share opinion of his clients which also means that he understands them well. But unlike for lessees, repayment length is more important to him (grade 4). For rest two factors he has neutral opinion, not considering them as important or not important. As a conclusion we can say that leasing companies should not ignore these factors in doing their business but they should pay more attention to first eight factors elaborated above.

Even if there is some difference between all factors according to their mean values, that difference is not so big except for grace period. We see from table 4-5 that eleven factors' mean values are from 4.86 till 3.40 what shows that even with small difference, all these factors are important to leasing users in leasing selection and sometimes small difference can play very important role in decision making. According to that, leasing companies have to pay huge attention to all marketing factors that can differentiate them from competitors. They should not neglect importance of any of mentioned factors and they should starve and make big efforts to keep existing clients and to attract new ones.

Conclusion

For many years leasing in Bosnia and Herzegovina used to offer the same leasing products and services to all leasing customers. The raise of competition seems to go in front the leasing company to adjust their services structure in order to "determine the leasing customer". As the leasing institutions are now attempting to make different themselves from each other, a new era has arrived which would be proven crucial not only for the institutions' market success but for their definite survival. Leasing managers are now required to implement the leasing marketing philosophy, aiming at identifying and satisfying the particular needs of leasing customers.

Findings of this study provide important information about factors that are important for leasing users. Also we saw satisfaction level of lessees by leasing services. These information can be very useful to leasing companies in way that they can concentrate their marketing strategies on important factors in order to gain clients' satisfaction and positive feedback.

This research can be useful for next generations that have intention to learn and explore leasing. Further research can be focused much more on leasing in Bosnia and Herzegovina, what are the obstacles and how to overcome them. Also different ways of how to do business in more efficient can be studied to help to improve economy of BIH and standard of living of all society.

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1155-1166, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

UDC 33

Students Perception about Financial Literacy: Case Study of International Burch University

[1] Minela Hadzic
[2] Mersid Poturak

[1] International Burch University, Bosnia and Herzegovina
Faculty of Economics, Management Department
Francuske revolucije b.b. 71200 Sarajevo
E-mail: minela220@hotmail.com
[2] International Burch University, Bosnia and Herzegovina
Faculty of Economics, Management Department
Francuske revolucije b.b. 71200 Sarajevo
E-mail: mpoturak@ibu.edu.ba

Abstract. University students, as a special consumer group, have important effects on leading trend and consumption structure. First of all, poor financial management is the main cause students are facing financial problem. Also, their characteristics of consumption and consumption status also reflect the student's value orientation. The aim of this study was to investigate how students of private higher education institutions in BiH make purchasing decisions and how they balance small budget with living expenses. The ability to manage finances impacts students both personally and academically. Financial literacy is the ability to understand how money works in the world: how someone manages to earn or make money, how that person manages it, how he/she invests it (turn it into more) and how that person donates it to help others. Data for this study were collected by using survey which are delivered to students of International Burch University. Implications provided valuable data for university administrators in management and student affairs, counselors, economic educators, and parents.
Keywords: Consumer group; financial management; consumption; budget; financial literacy.

Introduction

Many researchers tried to define financial literacy in the specific framework of modern world, so, as Chen & Volpe (1998) discovered, in the current economic climate of global recession, the management of personal spending and savings is more important than ever. University students, as a special consumer group, have significant effects on leading trend and consumption structure. They pointed out that many of researchers perceive them as a consumer group for which is necessary to provide specific offer to satisfy their needs and wants. Also, some earlier statistics prove that poor financial knowledge is the main cause students are facing different financial problems. Despite all other difficulties in managing their budget with expenses, lack of financial literacy is the leading one.

In their work, Kozup & Hogarth (2008) says that nowadays, it can take a great deal of inspiration, capability, and chance to class students as a unique consumer group by observing both relevant and irrelevant data needed to make optimum decisions. This requests a great deal of customers, many of whom face the burdens of time shortage as well as inadequate financial resources. Others basically cannot or do not want to execute all the tasks required to adjust their financial situation. Likewise, these financial decisions are person or household explicit: one family's decision may not work for another. And even if customers go through a rough decision-making process, there can be difficulties with implementation.

Some background could be reflecting to their purchasing decisions as a family spending habits and knowledge as it was said by Chen & Volpe (1998). They says that many students mentioned that they spend more money by using credit or debit card, so, in one hand, they began to control their spending by using cash. Their conclusion is that university students are not knowledgeable about personal finance. Also, they discovered that the incompetency will limit their capability to create knowledgeable financial decisions. Together with a proof provided by the study directed in the past three decades, the outcomes of this research advise that there is a systematic lack of individual finance learning in education system. The lack of education has caused in serious financial illiteracy problems. As they suggested, the illiteracy and its affluent penalties have made individuals worry about their finances to the point where their productivity in workplaces is affected. Students may even need to withdraw from college to earn money to repay their loans. They may not have accumulated any savings during college or have charged up to their credit limit and are unable to use their cards. Those are problems students facing through their education that are mentioned by Chen & Volpe (1998) .

By using survey, we are going to see current situation on one private university and perception of financial literacy among students. Those results will provide information for further research on this topic and some ideas how to improve actual students' money management skills.

Question remain, as to what factors enable students to manage their money rationally, how that is connected with financial knowledge, and how financial knowledge is related with expense intention, if they are willing to increase literacy in order to have rational spending habits, by having some educational courses.

Literature Review

Financial literacy

In the current economic disorder and growing recession, the supervision of personal spending and savings is more significant than ever, according to Huston (2010). He told that, as a basic term, financial literacy and knowledge usually are used in the newspapers alternately, so many of academics tried to explain and distinguish those terms by using unvarying tools.

In the words of Remund (2010) the theoretical definitions of financial literacy have developed as complex as the economy. Researchers and financial specialists have long disagreed on how to explain the concept. By the simplest definition Remund (2010) says that financial literacy relays to a person's capability for handling and managing money. The theory has not always been defined as financial literacy, but the indication dates to the early 1900s and the start of consumer education research and enterprises in the United States. Financial literacy is normally measured at the distinct level and then collected by groups, such as students or low-income grownups, to provide a macro interpretation.

Jappelli & Padula (2013) suggest that consumers use financial knowledge to increase prosperity and examine that those two terms are positively correlated. The approach demonstrate that effect of financial knowledge on prosperity and saving can be used as effective way in the regression of prosperity on financial knowledge, and they find microeconomics as useful tool for the approach forecasts.

Learning theories and financial knowledge

Jorgensen & Savla (2010) says that in most studies family resource management theory and social learning theory were used to reflect the perceived impact parents have on determining the financial awareness, attitudes, and activities of young adults. Social learning theory states that environmental influences young adults have had all through their life profile their attitudes and awareness, as said by Bandura (1986). According to him, as young adults learn over the years through social communication, they begin to comprehend and form their attitudes and knowledge about finances. So, because parents are the crucial stimulus in children's lives as they grow, the positive and negative financial attitudes and knowledge students have about money are mostly predisposed by their parents.

Spending behavior of students

In order to define financial attitudes and behavior of students and their spending intentions Hira, (1997) did a significant research and states that we are the product of our surroundings - both the family and the larger economic and market environment. Childhood experiences containing the parents' way of managing money, the opportunity to be involved in explicit financial tasks and the influence of socialization mediators all play an important role in affecting one's money nature. Two forms of buying behavior have appeared. First, a comparison between student and random samples displays that a much greater proportion of students than non-students reported being involved in the widely held group of abnormal buying behaviors. It is also stated that, for example, more than twice as many students than non-students testified that they buy when they do not need anything, they buy to have fun and they buy unpredicted items. In the same way, a much larger proportion of students than non-students point out that they cannot fight sales, they buy what they have not enough money for, they are preoccupied with spending, they hide stuffs they buy from the family and their spending practices make chaos.

Financial knowledge according to lifecycle

According to Lusardi & Mitchell (2011), in an progressively uncertain and globalized marketplace, societies must be able to make up-to-date financial conclusions. Firsthand international research determines that financial illiteracy is extensive in both well-built and quickly varying markets and that woman are less financially educated than men. They also established opinion that the young and the old are less financially educated than the middle-aged and more educated people are more financially well-informed. But, the most important thing is that the financially knowledgeable are more expected to prepare itself for retirement. They suggested that contributory variables demonstrate that the effects of financial knowledge on retirement planning have a tendency to be underrated, so around the world, financial knowledge is critical to retirement safety.

Financial education programs in high school

Lusardi, Mitchell, & Curto (2010) exhibit that is important to have financial education programs in high school. Firstly, it will be for parents who do not have university degrees or are not financially educated. According to evaluations, respondents whose parents did not have a university degree were 16 percentage points less probable to know about risk diversification, which is a crucial concept for financial decisions. While cognitive ability usually plays important role in the difference between individuals which are related to the different level of financial knowledge, it is not the only significant factor and that education can expand financial awareness. At the end, it is better to provide financial education before persons participate in financial contracts and before they begin making financial choices. According to these aspects, it may be essential to expand the value of financial knowledge programs presently existing in high school. Their research also lightened the significance of parental influences on young people's achievement of financial education. Including parents in a financial education program might be better solution than only concerning young adults. Parents who are involved in such a program possibly will take a more dynamic part in controlling their children's financial activities. So, such a program can help those parents who do not have enough financial knowledge to help their children with same useful financial instruction which will have effect on the future students, when they should make some more serious consumption decisions.

Purchasing power in family

As said by Hira (1997) one of the crucial skills that people must obtain to function in our civilization is the skill to deal with cash. This skill and the data needed to use it are learned largely through youthful. There were some kind of study on how children obtain financial education and degree to which parents stimulate and lead children while making financial decisions. In addition there is little information how families make financial decisions, when that actually begins, what kind of financial decisions they are part of and how and in which way families talk about finances. Hira (1997) exhibits that it remains to answer question of how those decisions have changed over years. The concentration of the marketing study should be on buying activity of the child, and also on socialization of children but with more work at the beginning of life cycle, and less at later stages. Also, there are facts about purchasing behaviors and how they have changed over years which should be observed too.

University students, females, males

On the word of Hayhoe, Leach, Turner, Bruin, & Lawrence (2000), the main thing that influences university students is affective credit buying which predicts the buying of gasoline, travel, or food away from home. There is difference between purchasing behavior of females and males: females buy clothing, males buy electronics and so on. Gender was more powerful in forecasting financial administration practices than was affecting credit approach, with female students engaging a bigger number of financial practices.

According to Lusardi (2009), young adults finish high school with low mean levels of financial literacy and there is little evidence that high school courses in money management are currently helping in raising those levels. There are some changes that may help student to raise adequate knowledge. These changes can include, for example, playing a stock market games or some other fun games, but related to this subject and also, having course with teachers trained for this type of educational programs. He suggests that teaching student such kind of thing is better with using some different games for high school student because study proofs that student are more likely to became more financial literate, and then provide real classes for university students.

In the words of de Bassa Scheresberg (2013), income and education are significant predictors of financial literacy and financial literacy increases suddenly with the level of income and education, while "do not know" replies drop when considering higher levels of income and education. Essentially, there remain to be large dissimilarities in financial literacy between those who have college degrees, a postgraduate education, even some college, and those whose education is inadequate to a high school degree.

Marcolin & Abraham (2006), proves that studies of financial literacy targeting university students have presented that, in general, students with a business major are more financially literate than other students. Nevertheless, no effort has been made to track financial knowledge and skills as students move through to the completion of their studies. Likewise, no effort has been made to relate financial literacy levels of students from diverse disciplines. They said that all research are simply made without different variables to present major area of study, likewise, students are perceived as one unique group.

Expense intention

According to Maity & Arnold, (2013) before purchase information searching about products and merchandises may be viewed as an *expense* and/or an *experience*. The authors discuss that theory is indistinguishable in edifying the effect of each form of search on a consumer's final product profit intentions. Other research question are established in relation to core theory that forecast unpredictable effects of search upon both product fulfillment and return intentions. Results in the long run advise that a consumer's investment in search that is viewed as an expense weakens satisfaction with a product, while encouraging return intentions. Contrariwise, search viewed as an experience increases satisfaction and diminishes return intentions.

Williams (2007) did literature review where he pointed out that in fast-changing markets that offer indefinite chances for manipulative marketing and barely show the conditions of effective learning even the most intrusive consumer education programs may have trouble changing *how* consumers make expense decisions.

Save now, invest in future

There is several long-term risks buyers face when they do not effectively save for retirement. Lack of financial resources during the later stages of one's life cycle can have upsetting effects on buyer health and wellbeing according to Howlett, Kees, & Kemp (2008). The importance of retirement savings in early life stages is serious, and thus, it is imperative for adults at this time entering the workforce to study the potential long-term penalties of their current spending and saving practices.

Jariah, Husniyah, Laily, & Britt (2004) says that the extension of the financial market will require buyers to have information and the capability to choose the services that meet their needs. Individuals are challenged by a new demand for their money in addition to gathering basic needs. Skills in credit, risk, and investment management are needed to empower customers to be able to maintain their finances and successfully meet their objectives. Giving and providing basic financial management knowledge and skills before graduates enter the work market can be useful so they are prepared with the skills required to manage their income successfully.

Financial education programs

Hathaway & Khatiwada (2008) claims that a number of studies have tried to estimate the usefulness of earlier run financial education programs. The types of programs considered embrace homeownership counseling, school-based financial education courses, workplace-based financial courses and credit card counseling.

Generally, the results are mixed. Some programs give the impression to be associated with better financial behavior and consequences overall, while others seem to reach better results for precisely targeted financial products or audiences. Some discoveries seem to oppose others, and some programs look as though they have very little or no effect at all. What is clear, still, is that financial education programs are most effective when they are segmented toward an explicit audience or range of financial activity.

Research Objectives

This research topic is concern as student perception, but also as an implication for current situation of student financial knowledge. The purpose is to see average knowledge related to financial management, financial literacy and overall student view about money and purchasing intentions. Research objectives for this study are:

- To define financial literacy
- To examine financial literacy as an education program which is applied in schools and universities
- To estimate whether financial knowledge is increased on one private university
- To identify opinions of student who are involved in investments or saving
- To draw conclusions about student ability to manage its own finances

By answering those few questions, we will make meaningful conclusion and see where we stand in a terms of manipulating and dealing with money, credit cards and estimate whether student lead parents as an opinion leader, or make decisions on their own.

Research Questions

There are several research question that are going to be tested according to the answers obtained from the survey used in this research study. RQ are:

RQ1: Students will take personal course about financialliteracy as an elective if offered.

RQ2: There is relation between level of education and student ability to manage its own finance.

RQ3: Most of students have saving accounts.

RQ4: Students tend to be very spending oriented-hardly ever saving money.

RQ5: Items learned in home while growing up was about budgeting.

RQ6: Students that are uncertain about how their money is spent also think that credit cards are safe and risk free.

RQ7: Students did not talk much about money with the parents, but they learn from their example.

Methodology

Data for the study were collected by using survey which was prepared in order to obtain expected responses. A total of 300 survey samples were distributed to the students from different departments of International Burch University via email, and we got in average 128 usable responses, because some students did not answered all questions that they were responsible for. Survey contains all necessary questions to make clear picture of students' perception toward financial knowledge and dealing with money.

Questions were prepared in way to ensure that students will give right and honest answer, either by choosing possible answer or providing new one. After collecting and preparing responses for analysis, data have been analyzed by using SPSS software. Operations that have been used are descriptive statistics and correlation. All questions have been mandatory to answer in order to create clear picture about attitudes of respondents. Results of these findings will be presented in following section.

Data Analysis

In this section, data are analyzed, and research question are proved by using relevant and valid statistics. Sample structure is:

Table 0.1: Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	58	45.3	48.3	48.3
	female	62	48.4	51.7	100.0
	Total	120	93.8	100.0	
Missing	System	8	6.3		
Total		128	100.0		

Table 0.2: Education level of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	undergraduate	81	63.3	67.5	67.5
	graduate	39	30.5	32.5	100.0
	Total	120	93.8	100.0	
Missing	System	8	6.3		
Total		128	100.0		

As we can see from those tables, there are total of 128 respondents, 58 male and 62 female, and 8 of them did not provide any answer related to degree of study. Education statistics include 81 undergraduate and 39 graduate students, and 8 didn't provide any information.

From this 128 students, 24, 2% are business students, 22, 7% are education students, 18% science students, 17, 2% engineering, 11, 7% some other faculty and 6, 3% did not answered this question. Those results are provided in the following table:

Table 0.3: Filed of the study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	business	31	24.2	25.8	25.8
	education	29	22.7	24.2	50.0
	science	23	18.0	19.2	69.2
	engineering	22	17.2	18.3	87.5
	other	15	11.7	12.5	100.0
	Total	120	93.8	100.0	
Missing	System	8	6.3		
Total		128	100.0		

After this sample explanation, there are several research question to be tested.
RQ1: Students will take course about financial literacy as an elective if offered.
For this research question, descriptive statistics is used, and there are results:

Table 0.4: Descriptive statistics for elective course

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	87	68.0	72.5	72.5
	no	33	25.8	27.5	100.0
	Total	120	93.8	100.0	
Missing	System	8	6.3		
Total		128	100.0		

From the given table, we can summarize that 68.0 % answered “Yes” and 25.8 % answered “No” and also for this question, we have 6,3% students who decident to not provide answer for this question. So, according to those results, we can accept this research question and say that students are interested in elective financial courses if offered.

RQ2: There is relation between level of education and student ability to manage its own finance.

Second research question is tested by using correlation test in order to find if there is relation between education level and student ability to manage its own finance. From the obtained results, we examine that p value is 0,097 and level of significance is 0,05, thus, p value is bigger than level of significance, so we will accept RQ0 research question which says that there is no relation between level of education and student ability to manage its own finance, and in the same way reject research question stated above.

Table 0.5: Relation between education level and student ability to manage its own finance

		Education	AbilityToManageFinance
Education	Pearson Correlation	1	.152
	Sig. (2-tailed)		.097
	N	120	120
AbilityToManageFinance	Pearson Correlation	.152	1
	Sig. (2-tailed)	.097	
	N	120	120

Next assumption is:

RQ3: Most of students have saving accounts.

For this assumption, descriptive statistics is used, and result is:

35,9 % of respondents have saving account, 18,8 checking account, 3,1% money market and 35,2% have some other financial account. According to those results we will accept RQ4 and say that most of students have saving accounts.

Table 0.6: Students’ financial accounts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	saving	46	35.9	38.7	38.7
	cheking	24	18.8	20.2	58.8
	money market	4	3.1	3.4	62.2
	other	45	35.2	37.8	100.0
	Total	119	93.0	100.0	
Missing	System	9	7.0		
Total		128	100.0		

Next research question is:
RQ4: Students tend to be somewhat thrifty –often saving money.

Some people tend to be very thrifty, saving money whenever they have the chance while others are spending-oriented, buying whenever they can and even borrowing to consume more. To see whether students tend to be somewhat thrifty or often saving money, we have used descriptive statistics and analyze answers obtained from the survey:

From the table, we observe following results: 8,6% students are very thrifty, 22,7% are neither thrifty nor spending oriented, 16,4% somewhat spending-oriented, 19,5 very spending oriented. Also, we can see that 25,8% are somewhat thrifty which proofs our research question that students often save money.

Table 0.7: Descriptive statistics for spending money

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very thrifty, saving money whenever I can	11	8.6	9.2	9.2
	Somewhat thrifty, often saving money	33	25.8	27.7	37.0
	Neither thrifty nor spending oriented	29	22.7	24.4	61.3
	Somewhat spending-oriented, seldom saving money	21	16.4	17.6	79.0
	Very spending-oriented, hardly ever saving money	25	19.5	21.0	100.0
	Total	119	93.0	100.0	
Missing	System	9	7.0		
Total		128	100.0		

RQ5: Items learned in home while growing up was about budgeting

For this research question descriptive statistic is used in order to examine results from the survey, and following table is obtained:

Table 0.8: Descriptive statistics for Items learned

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Budgeting	38	29.7	31.7	31.7
	Investing	24	18.8	20.0	51.7
	Insurance	6	4.7	5.0	56.7
	Work for what you receive	31	24.2	25.8	82.5
	Credit cards	10	7.8	8.3	90.8
	other	11	8.6	9.2	100.0
	Total	120	93.8	100.0	
Missing	System	8	6.3		
Total		128	100.0		

From this table, we can see that 29, 7% of the students answered budgeting, 18, 8% answered investing, 4, 7% insurance, 24, 2% work for what you receive, 7, 8% answered credit cards, 8.6% circle other, while 6,3% of the students did not provide any answer. So, this research question is accepted because 29, 7% of the students answered that they learned most about budgeting which was stated in research question formulation.

RQ6: Students that are uncertain about how their money is spent also think that credit cards are safe and risk free.

To see relation between uncertainty about how money is spent and perception that credit cards are safe and risk free correlation test is used, and those are results:

P value is 0.032, which is less than level of significance so we are going to reject Ho research question that says there is no relation between uncertainty and perception that credit cards are safe, and accept previous assumption that students that are uncertain about how their money is spent also think that credit cards are safe and risk free.

Table 0.9: Correlation between uncertainty and credit cards

		UncertainMoneySpent	CreditCardsSafe
UncertainMoneySpent	Pearson Correlation	1	.198*
	Sig. (2-tailed)		.032
	N	117	117
CreditCardsSafe	Pearson Correlation	.198*	1
	Sig. (2-tailed)	.032	
	N	117	119

*. Correlation is significant at the 0.05 level (2-tailed).

RQ7: Students did not talk much about money with the parents, but they learn from their example.

For this research question descriptive statistics is used:

Table 0.10: Descriptive statistics for learning from parent's example

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	My parents usually argued about the finances	15	11.7	12.6	12.6
	Within the family we openly discussed our finances	28	21.9	23.5	36.1
	My parents explicitly taught me about finances (e.g., credit cards, debt, budgeting, savings)	15	11.7	12.6	48.7
	We didn't' talk much about finances but I learned from their examples	44	34.4	37.0	85.7
	My parents included me in various financial decisions	12	9.4	10.1	95.8

	other	5	3.9	4.2	100.0
	Total	119	93.0	100.0	
Missing	System	9	7.0		
Total		128	100.0		

Results telling us that 11, 7% of students says that parent usually argue about the finances, 21.9 % openly discuss about finance, 11.7% says that parents explicitly told them about finance, 9,4% says that their parents include them in various financial decisions. We see that our research question is accepted because even 34, 4% of students learn how to manage their financial decisions by following their parents example.

Discussion

The purpose of this study was to make one complete picture of existing situation in educational institutions with particular emphasis on financial orientation of students, on one private university in Sarajevo. After analyzing, we accepted and rejected some of early described research question about students' expense intention, financial knowledge and some basic terms related to their purchase intention. Research question were tested and discussion is done for every assumption stated in the beginning.

It is interesting that even 68% of the students will take financial course if offered, which implicates that student are interested in increasing their knowledge about money management. It is important for students to be aware of their financial situation before making some investment or simple purchase. From the obtained results we can say that there is much more interest in increasing knowledge about financial management than current ability to deal with some important financial operations.

Also, what appears as meaningful thing to point out is that even two research questions prove that most of the students have saving accounts, and what we saw from other assumption is that most of the students are somewhat thrifty, often saving money. That can indicate that there is a real gap between those who have saving account and those who are thrifty, without saving accounts that are spending money immediately when they have it, or they save a little portion of the money they hold, without investing in future.

One of the questions was to rate their level of financial literacy, and most of them answered ''Not too sure - I wish I knew more about money management''. Even if the students are afraid where their small budget is spent, they are still reading about money management in order to improve their financial decisions. If we take into account that their parents play huge role in giving advices for financial decision, most of the students also agree that they learn how to deal with money generally by observing and leading their parent's example.

Answers provided from the survey indicates that this sample of the students contains those how have some rational understandings about financial literacy, but also those who are using credit cards, spend more than what they have in the pocket, buy on impulse by observing displays, and, mostly, education is paid by their parents. So, we can say that we have partial financial literacy achieved on this private university.

Conclusion

This research is done basically to see how much students are interested in learning more about smart dealing with money, and, from the research, we can say that there is interest for learning, just universities need to provide adequate courses, seminars or workshops in order to increase their financial literacy and in that way ensures smarter consumption and purchasing decisions.

In their study, Xiao, Tang, & Shim (2009) found results related to financial educations where financial behaviors broadly may influence not only financial satisfaction but also academic performance and satisfaction. Their findings and findings in this research of financial literacy in BiH on one private university could be used to develop action-oriented financial education programs that would not only deliver students the knowledge and skills to better reach their finances and advance their financial well-being but also help raise their academic satisfaction and life satisfaction.

Again, as Chen & Volpe (1998) said, considering opinions of the students from just one university suffers from several weaknesses. For example, studies on students use samples from only one university and many educations cover particular areas in personal finances, avoiding others. What's more, the validity of the survey instruments is uncertain because of the limited number of objects encompassed in the questionnaires. These limitations are influenced by the statement that many previous studies only report the altitudes of financial literacy without considering the factors that affect people's knowledge. None of the prior studies have observed how an individual's knowledge influences their opinions about personal finance matters and financial decision making.

What is also valuable to mention and to give incentive for, is that it is proven that students on this university usually save money, even there are uncertain where significant portion of their money is spend. This could be important for, for example, bank managers in order to create special offer for students as a unique consumer group, by giving them some programs to motivate them to save even more, and also to invest smart.

However students are also an attractive market: while they do have a limited budget many are living away from home and are consequently making free choices over which brands to buy for the very first time. The main incentive that should be done is providing good financial education, programs, seminars and so on, and then create specific offer for them that will be beneficial for them but also for the issuers of that offer. They will, actually, have educated consumer group in return.

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1167-1176, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

Pedagogical Sciences

Педагогические науки

UDC 37

The Level of Selected Determinants of Female Pupils' Lifestyle of Secondary Schools in Relation to Their Health

Elena Bendíková

Matej Bel University, Slovakia
The Faculty of Arts
Tajovského 40, 974 01 Banská Bystrica
Doc. Dr. (Pedagogic Sciences), PhD, Ass. Professor
E-mail: Elena.Bendikova@umb.sk

Abstract. Submission presents a partial objective and tasks with the intention on selected determinants of female pupils' lifestyle of secondary schools in relation to their health. Monitored group consisted of secondary school female pupils at the age of 18.1 years from the vicinity of L. Mikuláš. Selected and monitored indicators of somatic nature were determined by standard procedures and methodology based on general and school practice. Lifestyle questions were based on a standardized questionnaire. Results indicate, that there is a significant ($p < 0.01$) absence of sport activities with higher intensity in female pupils' lifestyle, which can, together with inadequate diet, participate in higher body weight ($p < 0.05$) and its other indicators (BMI and WHR). Listed partial discoveries are included in the grant: VEGA no. 1/0376/14 Intervention as physical activity as health prevention of Slovak population.

The article was written with the assistance of the Excellent Science at the Faculty of Arts of Matej Bel University in Banská Bystrica.

Keywords: adulthood; physical activity; health; lifestyle.

Introduction

One of the main tasks, which every man has to deal with during life, is healthcare. Unlike the past, nowadays, we put greater emphasis on personal responsibility of individuals for their own health, as well as the health of people entrusted to their care. Health is a category, whose protection is also embodied in legislation. In Slovak Republic it is Act No. 355/2007 Coll. on the protection, promotion and development of public health. Definitions of the terms are stated in general provisions of this act. While in the past, health was determined mainly by the influence of biological patterns, nowadays, it is becoming more determined by social factors. Health cannot be obtained as genetically given unchangeable state. Genetic base is just a biological potential, which can develop in a positive or a negative direction (Bendíková, 2014).

The health state and level of healthcare is determined by various factors (Šimonek, 2005; WHO, 2010):

- ✓ **Lifestyle**, which participates in health with 49 – 53 %.
- ✓ **The environment** with 17 – 20 % share on the health state.
- ✓ **Health care**, which has 8 – 10 % share on the health state.
- ✓ **Genetics** with 18 – 22 % share on the health state and its development.

In this context, it is important to miss out, that there are information about healthy lifestyle "attacking" us from each side. On the one hand, technical progress with its conveniences improve human life and beneficially affect the active life expectancy, on the other hand, deteriorate lifestyle, which shows the relationship between mortality and unhealthy lifestyle, including lack of physical activity. Physical activity shows tight connections in relation to the quality of life, lifestyle and health. Nevertheless, lifestyle, which lacks movement, has become all-society problem not only of adults, but also children and youths (Soos et al., 2010). It follows from the above, that the prevalence of civilization diseases and hypokinetic lifestyle is currently reflected on men's health (Hruškovič, 2004; Kayserová, 2004; Bunc, 2008; Zadarko, Barabasz, Junger, 2010, Zadarko, 2011; Kostencka, 2007a,b,c). Above stated also confirm numerous epidemiological studies abroad (Bailey, Martin, 1994; Amstrong, Simons - Morton, 1994; Welk - Blair, 2000; Lee, Paffenbarger, 2001; Tanasescu et al., 2002; Hemmingson, Ekelund, 2007; Pastucha et al., 2010; Bartik, 2005; Bartik, 2009), which in recent years pointed out, that hypokinesis affects the occurence of long-term noninfectious diseases, especially:

- ✓ cardio-vascular diseases,
- ✓ metabolic diseases (metabolism),
- ✓ endocrine diseases,
- ✓ skeleton and muscular systems disorders,
- ✓ impairments of the respiratory system.

Occurence of obesity (BMI > 30) in men and women has a rising tendency in some countries of the world (table 1). Moderate obesity (BMI 25 – 30), however, in many European countries and in the USA affects one third up to half of adults population, and it is necessary to look for its causes earlier. Increase compared to the 1980s is up to 50 % and alarming is also the increase of obesity occurence in children at the age of 6 – 15 years (Brettschneider, 2007).

Table 1: Occurence of obesity in selected countries (BMI > 30)

Country	Men %	Women %
Slovakia	19	14
USA	20	20
Japan	8	3
Russia	11	28
South Africa	8	44
Kuwait	22	44
Greece	27	18

Obesity epidemic of children and youths is also visible in Slovakia. Researches show, that approximately 18 % of children suffer from overweight, about 7 – 10 % is obese and situation is getting worse. Severe obesity is associated with a 12-fold increase of mortality of 15 – 35 years old persons when compared with thin persons (National Audit Office 2001). Slovak project MONIKA in 2002 found out, that from 68 767 people 57.4 % of people at the age of 15 – 64 years old suffer from overweight and obesity (Bendíková, 2012).

It is important to point out, that there are two types of obesity according to the area, where there is excessive fat in the body (Galajda, 2007):

a) Obesity of the upper part of the body, also known as abdominal, android, male or central obesity.

b) Obesity of the lower part of the body, also known as gluteal-femoral, gynoid, feminine or peripheral obesity.

The main objective of the project IDEA was monitoring of abdominal obesity in wider population groups in the world and in Slovakia in 2005. Abdominal obesity (defined as a waist measurement > 102 cm in men and > 88cm in women) represents an important marker for a metabolic syndrome and is proven to be an important risk factor of serious cardiovascular events. So far, this obesity was not systematically monitored in Slovak conditions. Alarming, particularly in women, is connection of abdominal obesity with cardiovascular diseases, arterial hypertension and diabetes mellitus (Dukát et al., 2006).

7th nationwide anthropometric survey, which took place in 2011 under the auspices of the Public Health Authority of the Slovak Republic in cooperation with the Institute of Hygiene of Faculty of Medicine of the Comenius University in Bratislava, which listed 18 114 children and youths (9 073 boys and 9 041 girls) at the age of 7 – 18 years, points out the following facts in relation to the body weight.

In comparison with 2001 there was, almost in all monitored age groups of boys and girls with the exception of 16 year old girls, statistically significant increase of the average body weight in boys ranging from 1.6 – 5 kg and in girls 0.6 – 3.4 kg. There is a high growth in guys at the age of 10 – 15 years, when we still record growth acceleration, but significantly higher values (about 2.9 – 3.8 kg) are also at the age of 16 – 18 years when the height stagnates or more precisely, is lower compared to 2001. While in 2001 18 year old boys were heavier on average by 0.6 kg than in 1991, in 2011 they were, compared to year 2001, heavier by 3.8 kg. The average weight of 18 year old girls is higher compared to 2001 by 1.7 kg. Between two previous decades (1991 and 2001) the difference at the 18th year of life was statistically insignificant, only 0.15 kg.

During last measurements there were not recorded any intersexual differences in the body weight of boys and girls in terms of higher values in girls during puberty. In all age groups boys were heavier or more precisely in the 10th year of life they had the same average weight. Boys are on average heavier than girls by 14.8 kg at the 18th year of life (UVZ SR, 2007).

Ministry of Education of the Slovak Republic points out the fact, that up to 70 % of schoolable children and youths spend four hours of their free time on computers, the Internet, watching television or entertainment with mobile phones. Authors such as Junger (2000), Šimonek, Foťková (2006), Peráčková (2008) support these statements. Ministry warns, that only every third pupil does regular organized physical activity.

It follows from the above, that deficit of the physical sporting activities in movement regime of children and youths is a presumption for the increase of excessive body weight and childhood obesity (Helm, 2001; Brock et al., 2009), whose result is frustration from physical appearance, reduced acceptance by peers, rejection, isolation, mockery, which are manifested in socialization, which negatively affects mental health and quality of life (Medeková, 2010). Excessive body weight and obesity in childhood increase probability of their continuation in maturity, which increases the risk of other health problems.

Aim. To extent knowledge from the area of selected lifestyle determinants of secondary-school students in relation to selected health factors and thus contribute to solving the issue, which has currently ascending tendency in children and youths and demonstrates itself in later age.

Materials and methods

Monitored group consisted of 116 female pupils of fourth grade of secondary schools in L. Mikuláš, whose average age was 18, 1 years. Primary characteristics of the monitored group is in a Table 2 with average values.

Table 2: Characteristics of the group (n = 116)

File	n	Decimal age	Body height/cm	Body weight/kg	Body mass index
Girls	116	±18,3	168,2	60,4	23,9

Somatic measuring of the monitored group was made after the agreement within preventive examination in a private ambulance of general practicioner in L. Mikuláš. Research was conducted between January – March 2014. For the examination of selected determinants of physical development we used standard methods to identify: body height, body weight, waist measurement, hips measurement, where to examine the proportionality we used weight-height index (Body Mass Index/BMI) (table 3), WHR index (Waist to Hip Ratio) and weight OMRON Body Composition.

Table 3: BMI and classification of the body weight according to the WHO (Fábryová, 2006)

	Class of obesity	BMI (kg/m2)	The risk of associated diseases
Underweight		< 18.5	
Normal		18.5 – 24.9	Average
Overweight		25.0 – 29.9	Increased
Obesity	I.	30.0 – 34.9	Moderately increased
	II.	35.0 – 39.9	High
Extreme obesity	III.	≥ 40	Very high

Our qualitative and quantitative data was processed by frequency analysis and chi-squared test (1 %; $p < 0.01$ and 5 %; $p < 0.05$ level of significance), with which we monitored the significance of differences between levels of monitored factors, as well as the answers to selected questions of a standardised questionnaire (CINDI). Simultaneously, we processed data in a graphic form, we used methods of logical analysis, synthesis, as well as mental actions to interpret the results.

Research results and discussion. Based on partial objective and tasks, we present a part of results, which are a subject of a further scientific monitoring and processing. Stated results cannot be generalized, but it is necessary to understand them in overall context as informative and initial considering the lifestyle of adolescents. Obesity in combination with hypokinesis is considered to be a significant risk factor, which negatively impacts on morbidity and life expectancy. In this combination the effect of the risk factors is multiply increased. From the BMI evaluation in female pupils we came to the following (table 4).

Table 4: The BMI evaluation in female pupils (n = 116)

Classification of the body weight	underweight	normal weight	overweight	obesity
(n = 116)	6 %	47 %**	39 %*	8 %

Legend: BMI (Body Mass Index), **the level of significance $p < 0.01$,
* $p < 0.05$

The basic indicator monitores the current population, but more than 39 % (Chi = 6,009; $p < 0.05$) female pupils are overweight and 8% are overweight. Normal value of the BMI was found in 47 % (Chi = 8,138; $p < 0.01$) and underweight was found in 6 % of female pupils.The level of WHR (Waist to Hip Ratio) based on the measurements of external parameters in female pupils represents table 5, where we found, that up to 73 % (Chi = 11,633; $p < 0.01$) female pupils have peripheral, 12 % balanced, 9 % central and 6 % risk distribution of fat. The value of the visceral fat by weighing machine OMRON BODY Composition pointed out, that in 13 % there is moderately increased risk of visceral fat from the overall number of monitored group in the area of abdomen, hands and lower limbs.

Table 5: WHR evaluation in female pupils (n = 116)

	Kind of fat distribution			
Types/n	**peripheral**	**balanced**	**central**	**risk**
values	< 0.75	0.76 – 0.8	0.81 – 0.85	>0.86
(n = 116)	73 %**	12 %	9 %	6 %
Σ	100 %			

Legend: WHR (Waist to Hip Ratio), **the level of significance $p < 0.01$

Health not only influences the amount of excessive fat, but also its distribution in the organism. Obese individuals, who have excessive fat stored around the abdomen area (visceral type of obesity), have a greater risk of developing health complications than those, who have fat stored on hips and buttocks. Adipose tissue of men and women with abdominal and visceral obesity is characterized by large fat cells, increased activity of lipoprotein lipase (a key regulator of fat accumulation), increased lipolytic activity and low antilipolytic insulin effect. Interesting thing is, that the amount of visceral fat is not dependent on the amount of subcutaneous fat in the body, which means, that even in the case, that the man does not suffer from an excessive fat, visceral fat may furtive threaten human health (Hainer, 2004; Lisá, 2004). Kuzmová (2003) adds, that the excessive amount of fat in the body is created whenever there is an inequality between energy intake and expenditure. The largest energy expenditure represents the basal metabolism rate (around 75 % of the overall energy expenditure), less energy is consumed during various forms of physical activity (about 10 - 15 %), during heat formation after food intake (also 10 - 15 %) and under the effect of several stimuli (stress, cold, etc.). Even 1 % unbalance in the energy balance will cause one kilogram of weight growth within a year. Whereas adipose tissue contains about 75 % fat, which is the main storage form of energy, obese individuals have approximately 30 000 kJ (7 000 kcal) in each kilogram of excessive weight. There are several causes leading to the energy unbalance and apparently they are combined variously in obese people. Also Galajda (2007) points out the risk of developing cardiovascular diseases as a result of increased WHR. Bendíková (2011) adds, that this state is likely to be caused by wrong lifestyle and the proportion of individual components (diet, drinking habits, excercise, relaxation, stress, sleep, etc.). We assume, that higher body weight in female students is connected with a lower volume of physical activities with higher intensity in their movement regime.

We also refer to the connection with reproduction, where we found out, that women with lower WHR have less infertile cycles as well as less irregular menstrual cycles. Women with lower WHR have more regular menstrual cycle and less anovulation cycles than women with higher WHR (Singh, Singh, 2006). At the same time, they have optimal level of sex hormones and higher pH of the mucus endocervical, which helps penetration of sperms. This means, that the level of estrogens and progesterones in a fertile phase of menstrual cycle in these women is generally higher than in women with high WHR. It follows from the above, that increased rates of BMI and WHR have a relation to fertility and regularity of menstrual cycle (Rokyta, 2000). WHR value is also in a relation to women's sexual behaviour.

On question considering satisfaction with figure, 36 % ($p < 0.05$) of female pupils responded, that they are satisfied, 49 % (Chi = 9,765; $p < 0.01$) said no, 9 % said just partially and 6 % do not know (table 6). Unsatisfied, in relation to the figure, are mainly with their eating habits and content, which lacks regularity of smaller portions, drinking habits, sufficiency of fruits and vegetables at the expense of eating in fast foods, which is tasty and high caloric. Eating in fast foods has become an image matter for young people.

Table 6: Satisfaction with a figure (n = 116)

Answer/n	yes	no	partially	I do not know
(n = 116)	36 %*	49 %**	9 %	6 %

Legend: **the level of significance $p < 0.01$; $p < 0.05$

Table 7 shows the current rating of female pupils‘ health state, where we found the following. 43 % of girls stated, that they have minor health problems, which are in connection with painful menstruation, headaches or with skeleton and muscular systems.

Table 7: Evaluation of girls' health state (n = 116)

Current girls' health state				
Evaluation/n	**I am healthy and in a good shape**	**I am healthy, but not in a good shape**	**I have minor health problems**	**I have serious health problems**
(n=116)	19 %	21 %	43 % **	7 %

Legend: **the level of significance $p < 0.01$

This finding is significant at the 1 % significance level (Chi = 7,633; $p < 0.01$). 21 % of female pupils stated, that they are healthy, but are not in a good shape, while only 19 % of them stated, they are in a good shape and are feeling healthy.From quantitative indicators "Daily and weekly regime" of female pupils we found the following representation of living factors, which are a part of their lifestyle (table 8). Fact, that results from ascertained data is, that passive lifestyle of female pupils is twofold higher compared to the active lifestyle. While the overall movement (including hygiene, going to school and back, movement at school and home environment) represents at average only 4 – 5 hours a day. Lost time represents 4.0 – 5.5 hours a day. It represents 28 – 38.5 hours of lost time within a week. This means, that female pupils are not able to properly organize and adjust daily and weekly regime (or motion), economize time and use possibilities to develop personality in relation to health, whom they, on average, dedicate 1 hour of active relaxation.

Table 8: Everyday activities of female pupils' lifestyle (n = 116)

Daily and weekly regime		
Daily regime	**Activity**	**Weekly regime**
time		**time**
6.0 – 7.5 h	sleep	42 – 52.5 h
0.5 – 1 h	hygiene	3.5 – 7 h
0.5 – 1 h	way to and from school	3.5 – 7 h
7 – 8.5 h	school	35 – 42.5 h
1 – 1.5 h	nutrition	7 – 10.5 h
0.5 -1 h	education	3.5 – 7 h
2 – 3.5 h	friends	14 – 24.5 h
1 h	active relaxation	7 – 7 h
1.5 h	EGA	7. 5 – 8.5 h
4.0 – 5.5 h	lost time	28 – 38.5 h
24 hours		168 hours

Legend: EGA - educational gymnastic activity.

From physical activities female pupils are devoted to recreational swimming, skiing, cycling and volleyball. They prefer aesthetic forms of exercise enhanced by music (various forms of aerobics), with the aspect of formation of the body culture and movement expression. There is an emotional component (motive) as a specific character and a significant stimulating value of the movement.

In terms of weekly frequency (table 9) we point out the fact, that female pupils do sports activities irregularly in 34 % (Chi = 5,893; $p < 0.05$), once a week it is 16 %, twice a week it is 13 % and three times and more a week only 8 % of respondents. Interesting finding was, that only 29 % of respondents do not do sports activities at all.

The most frequented reasons, which prevent female pupils from sports activities are: lack of free time, school preparation, cushiness and weak will to overcome physical inactivity. Many of them would be interested, however, they often do not know how to and where to participate in regular physical activities. We can perceive stated facts from several points of view, which can become the subject of various debates.

Table 9: Frequency of female pupils' physical activity a week (n = 116)

Frequency of PA	I do not do PA	I do PA regularly	once a week	twice a week	3 times a week
n = 116	29 %	34 %*	16 %	13 %	8 %

Legend: PA – physical activity, *the level of significance p < 0.05

Monitoring the degree of integration into doing sports activities in term of previous educational gymnastic activity we found, that female pupils, who in the past did sports activities, excercise more regularly (21 %) than women who did not do any educational gymnastic activity (27 %).

The intensity of the sports activity is in 58 % ($p < 0.01$) low, while 33 % represents medium intensity value and in 9 % the intensity of sports activities is high. Stated intensity, as well as the frequency, is related to female pupils, who do sports at a representative level in the alpine skiing.

Doing sports activities is closely related to the question: In which organisational forms do female pupils sports activities most likely (table 10). Only 2 % of female pupils stated, that they do sports activities by themselves and another 2 % with parents because of the time illimitability and commitment, content and intensity, while 29 % of female pupils prefer organized collectives and 38 % (Chi = 5,999; $p < 0.05$) stated they excercise with friends.

Table 10: Way of realization of female pupils' sports activity (n = 116)

Way of PA	herself	organized collective	with family	with friends	I do not excercise
n = 116	2 %	29 %	2 %	38 %*	29 %

Legend: PA – physical activity, *the level of significance p < 0.05

Leisure time, as one of the phenomena of active relaxation in human lifestyle, plays an important role in term of its utilization and personal realization. It is also connected with motivation, which determines an individual for certain objectives, orientation and certain activities by provoking the individual to act in accordacne with the aspiration. Even adolescents do not act in sports sphere of recreational nature spontaneously without motives (Ewiaková, 2003). If we start from the fact of the hypokinetic way of life as the expression of the current form of interests, then knowledge of the interest preferences of female pupils is a presumption to realization and regulation of interests, so they become a positive element in the structure of the living values.

From the risk factors, that dominantly appear in female pupils' way of life, prevails the lack of physical activity of educational gymnastic and sports character in 56 % (Chi = 8,932; $p < 0.01$). It also includes stress situations (21 %), but also incorrect eating habits (37 %, Chi = 5,990; p < 0.05), which can be manifested, as we know, in the form of anorexia, or bulimia. According to Šimonek (2005) BMI determined by us in girls is at the limit of a norm. Questionable remains also the use of alcoholic beverages and smoking, which stated 5 % girls. Questionable also remains whether they stated their real state.

Dominant are, in term of health care, also physical activity and nutrition,which are not significant, but also massages or relaxation. We would like to point out, that girls are also devoted to active relaxation and its positive effects on health, but they also pay attention to psychical health (Chi = 7,666; p < 0.01), which is probably related to a higher number of stress factors during the day and week in a working and family environment.

Conclusion

Utilization of sports and recreational activities in order to improve health and shape is insufficient in the monitored group, which was confirmed significantly. At the same time, findings significantly point out on low intensity (p < 0.01) of realized sports activities and their irregularity to a greater extent, as well as a higher volume of lost time at the expense of its utilization in favour of physical and mental health by active relaxation. Monitored factors of body development point out, in about one third of female pupils, increased body weight, they also have minor health problems. Peripheral distribution of fat (p < 001) in a monitored group was observed in 73 % of female pupils. They also expressed dissatisfaction with their figure. Which means, that stated has aesthetic and health dimension and impact.

It results from these findings, that everybody should find time for optimal physical activity, three times a week for at least an hour. The concent of activities should be various physical programs or excercises of aerobical character, with compensating, stimulating and regenerative functions in relation to the physical and mental health.

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1177-1181, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

UDC 37

Slovak Thinking on Translation

Vladimír Biloveský

Faculty of Arts, Matej Bel University, Slovakia
40 Tajovského Street, 974 01 Banská Bystrica
PhD (Translation Studies) Associate Professor
E-mail: vladimir.bilovesky@umb.sk

Abstract. The paper focuses on the contents, message of Slovak translation theorists as well as their contribution to international translation studies. At the same time, the paper presents and seeks for application of their theoretical musing in contemporary transation studies and searches for possible reasons of their often inadequate interprertation and lack of theoretical "updating".
Keywords: the Slovak thinking on translation; shift; communication theory; taxonomy of expressions; Slovak translation school; Anton Popovič; Ján Ferenčík; Ján Vilikovský.

Introduction

Slovak translation studies / The Slovak thinking on translation* took shape as a discipline in a specific geographical, cultural, social and political space that was shared by Czechs and Slovaks, one that would influence and perhaps even predetermine its course over several decades. This basic truth cannot be ignored or circumvented when considering the Slovak thinking on translation and its fundamental ideas, works and thinkers; nor can we avoid discussing the entrenchment of former Czechoslovakia in the socialist, Soviet-led Eastern Bloc when articulating the foundations of the field. Furthermore, the works of Slovak translation scholars reflect the influence of Soviet structuralist and literary communication theory, represented by figures such as semiotician Yuri Lotman. The impact of Western translation studies on its Slovak counterpart was first put in motion by networking on the part of Jiří Levý and Roman Jakobson, thanks to whom the conference *Translation as Art* was held in 1968 in Bratislava under the auspices of the International Federation of Translators. The conference was also attended by James Holmes, who paved the way for the proceedings' publication under the title *The Nature of Translation* (1970). Anton Popovič, who contributed the paper *"The Concept of 'Shift of Expression' in Translation Analysis"*, also co-edited the proceedings, so it is likely that he had a close relationship with fellow editors James Holmes and Frans de Haan.

The basic concepts of the Slovak thinking on translation

The basic concepts of the Slovak thinking on translation were established as early as the 1950s, largely thanks to the efforts of Slovak and Czech linguists, literary scientists and translator-

*Traditionally in Slovakia, the designation the Slovak thinking on translation is used insted of Slovak translation studies.

theorists such as Bohuslav Havránek, Karel Horálek, Bohuslav Ilek, Jiří Levý, Karel Hausenblas, Viktor Kochol, Jozef Felix, Oskár Čepan, Zora Jesenská and Ján Ferenčík. It was then that the fundamental concepts of general translation theory were formulated, taking directions related to linguistics, stylistics, versology and literary science. The scholars involved devoted themselves primarily to literary translation, which reflected the translation trade's focus on literary texts at the time. But it was in the 1970s and 80s that the Slovak thinking on translation truly came into its own, a phase of theoretical development that could, without a hint of irony, be called the Popovičian Period. This period yielded five essential monographs that determined the course of the Slovak thinking on translation for several decades and, in our view, informed translation theory in other countries as well. The most influential of all was Popovič's 1975 monograph *Teória umeleckého prekladu* (*The Theory of Literary Translation*, 1975). It was followed in 1977 by Ľubomír Feldek's *Z reči do reči* (*From Language to Language*, 1977). 1982 saw the publication of two major works: Ferenčík's *Kontexty prekladu* (*Translation Contexts,* 1982) and Július Rybák's *Kapitoly o jazyku a prekladaní* (*Topics in Language and Translation*, 1982), and in 1984 Ján Vilikovský published the monograph *Preklad ako tvorba* (*Translation as a Creative Process*, 1984). Each of these titles represent a distinct view of translation, their authors united by what may at first appear a trivial detail, but was in fact pivotal in the development of Slovak translation theory: in addition to being major theorists of their time, Feldek, Ferenčík, Vilikovský and Rybák also happened to be practising translators.

But despite its significant contributions to translation theory, history and criticism, as well as to the practice of translation, little of the scholarship in other countries cites the Slovak thinking on translation as an influence. Except a few entries in encyclopedias of Translation Studies focusing on F. Miko, A. Popovič, J. Vilikovský and Slovak tradition.[*] That said, conceptual parallels can certainly be found, though they are not explicitly acknowledged. This may be due to the fact that not all major Slovak monographs in the field have been translated into English. Slovak and Czech translation studies are given a thorough treatment in Zuzana Jettmarová's paper *Czech and Slovak Translation Theories: The Lesser-Known Tradition* (2008:15-46), in which she looks at how our theorists' conclusions have been misinterpreted and attempts to determine the causes thereof. In 2006, Popovič's *Teória umeleckého prekladu* (*The Theory of Literary Translation*) was translated into Italian. In his review to the translation Steconni (2007:174) describes the book as follows:

> How can it be that the book does not show the age? I can think of two reasons: either Popovič was a Leonardo-like genius way ahead of his time, or Translation Studies has been running out of steam lately. Questions he asks are more than open.

In our attempt to describe the Slovak thinking on translation, we have opted to proceed from the work of translation theorists / literary scientists Anton Popovič (1933–1984) as well as that of the brilliant theorist-translators Ján Ferenčík (1923–1989) and Ján Vilikovský (1937). These authors' theoretical musings on translation have influenced both the Slovak and Czech cultural milieus for several decades, and they are beginning to inspire translation studies in other countries as well.

Anton Popovič and his contributon to translation theory

The key concept of the Slovak thinking on translation **is shift**, which would later become shift in translation. Popovič (1970:78-87) considered the idea as early as 1970 in his essay *The Concept 'Shift of Expression' in Translation Analysis*, defining it on the basis of Miko's taxonomy of expressions, but clearly also on that of Levý's stylistic shift. Up to that point, differences between the source text and its translation had only been assessed empirically and subjectively, though a certain amount of subjectivity is doubtlessly still present both in Popovič's shifts and Miko's taxonomy of expressions. Nonetheless, the concept of shift of expression is an attempt to objectively determine and give a name to what is lost and gained in the translation process. It allows us to delineate translation approaches more precisely, label differences between the original and the translation, even identify the styles of individual translators. And to this day it enables us to investigate oft-disregarded equivalence, given that shifts of expression are used in order to attain equivalence at the higher level of the text. Shifts can thus signalize equivalence between the source

[*]BAKER, M. (ED.), 2001. Routledge Encyclopedia of Translation Studies. London and NewYork: Routledge, 2001.

and target texts, emphasizing the fact that the term is not restricted to describing "negative" changes occurring during the translation process; it also aims to describe the broadest possible array of phenomena that occur when textual-cultural material is transferred from one culture to another. Taken together, Popovič's shifts of expression in translation – which he further divides into constitutive shifts, individual shifts, retardation shifts, negative shifts, thematic shifts, generic shifts and rhythmic shifts (1983:196) – and Miko's taxonomy of expressions enable us to compare the source and the target text with the goal of establishing the extent of their commensurability or relation to each other. Popovič views the text within the wider contexts of its micro- and macrostylistic construction. Still, interpreting changes in translation is impossible without an understanding of Miko's previously-mentioned taxonomy of expressions. Popovič (1983:196) therefore identifies four basic levels at which shift can occur:

a) **subjective/objective** (the level of opposition of constitutive and individual shift) The category of constitutive shift views the text from a linguistic perspective, while individual shift applies an interpretative perspective.

b) **invariant/variant** The level of positive and negative shift based on the character and size of the intertextual invariant, on the degree of loss and compensation (+ -), and on the preservation of the extent of semantic and aesthetic information in the text

c) **macrostructure/microstructure of the text** The level of a wide range of shift types depending on the extent of the text where the shift arises (changes of expression)

d) **functionality/baselessness** This axis overlaps with the subjective/objective level, but is understood as an expression of those aspects of translation style, canon, method and movement affiliation which are tied to the translation's particular time of creation. This is the level of generic shifts, rhythmic shifts, thematic shifts, semantic-retardation shifts, etc. This view of shift typology is informed by a higher standard for the typology and determination of the character of shift—the goal of the literary communication (or, in the case of translation, metacommunication). This goal determines the essence of the shift and the relativeness of its classification.

As we see it, Popovič does not consider shift as a negative phenomenon. Negative shift is only one of the possible categories of phenomena that can occur during translation. Popovič does not therefore prescribe what a text should 'become' when transmitted to another language and culture; he instead describes universal phenomena which always accompany transactions of text and culture. It is here where we pinpoint his principal contribution to the emergence of descriptive translation studies.

These are, above all, terminological contributions, but they also contribute methodologically to the theory, history and criticism of translation, and even to translation in practice. A further contribution of Popovič's is his communication theory of translation. The theory's central concept is the text, both the original and the translation, which manifests itself as an intersection of two axes: the operative/pragmatic and the communicational/iconic, that is to say reflective axis. This view of the text allowed Popovič to create a model where translation is regarded as one of various modes of communication. Communication theory of translation proceeds from the basic communicational rule of three: author—text—recipient, which Popovič expanded into author1—text1—recipient1 (the primary act of literary communication) → author2—text2—recipient2 (the secondary (meta) act of literary communication), resulting in a model that allows us to evaluate the presence of both the author and the reader in the text. Keep in mind that the presence of the author refers to all factors projected in the text that are connected to the author's idiolect. Later developments in literary communication theory consider the reader's presence in the text: their experience of reading the text, their past reading experience and their taste. Popovič's translation model is a model of primary and secondary communication insofar as it acknowledges a two-fold projection of the reader in the text: first in the original, i.e. source text, and then in the translation, i.e. the target text. Furthermore, we cannot omit Popovič's understanding of translation as intercultural communication, through which he introduced the following concepts: interspatial factors in translation, cultural factors in translation, cultural creolization in translation, temporal cultural factors in the translated text and domestic culture in translation. In defining these concepts, he drew on those conceived by Russian semiotician Yuri Lotman. Popovič's theories have been criticized for being too theoretical and not offering 'instructions' on how to translate. He responds to such objections in *The Theory of Literary Translation (Teória umeleckého prekladu)*

(1975:9) by saying:

...it is not my intention to offer a ready introduction to translation practice, nor to the 'art' of translation. Between the theory and practice of translation, there may be many 'mediating' factors that open up avenues in both directions.*

To his own defence, he adds that "theoretical preparation has yet to do a single translator any 'harm "(1975:10).

The contribution of Ján Vilikovský to musings on translation

Vilikovský's musings on translation, grounded in translatorial optimism, proceeds from Levý's theoretical legacy as reflected in his view of the translation process and in Popovič's communication theory of translation, which in turn informed Vilikovský's view of the role of the reader of the translation as the communicational chain's final element. Vilikovský arrived at his theory inductively, through a comparison of the actual state of literature and translation practice, as opposed to basing it upon a priori postulates. His main innovation is his way of viewing the translation process, which he splits into three phases: interpretation and reception, establishment of a translation strategy, and creation of the actual translation, or reproduction. Vilikovský also points out that interpretation and strategizing differ significantly in focus, i.e. they are not the same thing. He emphasizes that Levý's division also expresses suspicion of the usual two-part division, and thus postulates a third phase dedicated exclusively to translation. In Vilikovský's view, translation is an inseparable part of a national culture. It is via translation that a culture becomes self-aware—and hardly anywhere is this more evident than in Slovakia. The smaller the nation, the greater the role of translation. Every translation and every development that fulfils its communicative function in the given cultural context is, according to Vilikovský, a good translation. In one of his more recent (2008:16) works on the subject, he answers the question "What is still translation?" thus: "'Everything', or at least 'everything that wants to be.'"

Ján Ferenčík and the Slovak school of translation

Analyses of actual translation production in the Slovak cultural context have also 'demanded' the application of translation theory in the form of a systematic, comprehensive translation method. It was through this method that the Slovak school of translation was born. Often referred to as a creative method, we see this 'school' as something open-ended and still in progress; after all, its formulation over forty years ago did not put an end to thought on translation. Quite the contrary—it intensified, partially influenced by the developments of other social sciences such as linguistics, culturology and literary science, among others.

Following the post-1945 cultural shifts in the region and their profound effect on the fields of literature and translation, there was a tendency towards the stabilization of translation methodology, a trend that affected the majority of translators. The accepted method began to be seen as a universal, supra-generational dogma. Later, in connection with the need to develop qualified translation criticism, this method began to be referred to as the Slovak translation 'school'. This designation applied above all to the field of literary translation. There is no need to view the Slovak school of translation as a unified coalition adherent to a particular agenda, devised once and for all time, set in stone and obligatory for its constituents. It could be more accurately described as a complex of techniques giving rise to a creative method which became the predominant, most productive and characteristic approach for a certain period of development.

The thought behind the translation method was never random or an end in itself; there is a history to its origins, and it took decades to fully take shape. Two works which could be considered seminal in this regard are Ján Poničan's translation of Alexander Serafimovich's novel *The Iron Flood*, (Zheleznyj potok, 1924) and Zora Jesenská's translation of Mikhail Sholokhov's novel *And Quiet Flows the Don* (Tichij Don, first and second volumes 1928, third volume 1932, fourth volume 1940), both of which featured translation strategies and solutions that inspired major discussion. At a conference on the interpretation of literary texts in Dudince in 1980, Ján Ferenčík spoke on the state of translation criticism in Slovakia, including an evaluation of these works and their

* Own translation

influence. This assessment of the Slovak translation school drew the attention of certain theorists, and it would later become a topic of discussion on the turf of a translators' organization. Later that year, at the Summer School of Translation Studies, Ferenčík enumerated certain features in the form of principles (the principle of textual completeness, the principle of semantic equivalence, the principle of formal equivalence, the principle of good Slovak (along with the principle of strictly purposive use of non-standard elements), the principle of semantic equivalence's primacy over formal equivalence, and the principle of a conceptually unified translation). As Slovak translation at the time was dominated by Russian as a source language, these principles were largely formulated on the basis of Ferenčík's study of literary translations from Russian, though later they were generalized as a method for translation of other literatures. The abundance of high-quality Slovak translations of world literature attests to the wisdom behind Ferenčík's principles.

Conclusion

Why are Slovak translations theorists being forgotten today? Do they still have something to say? Several answers to these questions spring to mind. First of all, we suspect that the main cause is the inadequate promotion of the Slovak thinking on translation abroad, coupled with the insufficient coordination of Slovak inquiry with the field's international context. It is our duty to renew and revive these ideas and show that though many of them have aged, just as many of them still work and are applicable not only to theory but also to the practice of translation. A clear sign that we are currently witnessing a revival in this field can be seen in the activities of the four Slovak universities with translation programmes (Nitra, Bratislava, Prešov, Banská Bystrica and Košice). At these institutions, new topics are being explored, such as the sociology of translation and translation criticism, the application of shifts in translation of non-literary texts , audiovisual translation, problematic aspects of intercultural communication, ideology in translation and interdisciplinary cooperation in research on interpreting, particularly regarding the field of psychology.This is to say that the situation is far from critical, and we in Slovakia cannot complain of a lack of stimuli in the field of translation studies.

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1182-1188, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

UDC 37

Experiences With Implementation of Service-learning at Matej Bel University in Banská Bystrica

[1] Alžbeta Brozmanová Gregorová
[2] Zuzana Bariaková
[3] Katarína Chovancová
[4] Martina Kubealaková
[5] Jana Šolcová

[1-5] Matej Bel University, Slovakia
Faculty of Education, Department of Social Work
doc. PhDr., PhD.
E-mail: alzbeta.gregorova@umb.sk
[2] Faculty of Arts, Department of Slovak Literature and Literary Science
PaedDr., PhD.
E-mail: zuzana.bariakova@umb.sk
[3] Faculty of Arts, Department of Roman Studies
Doc. PhDr., PhD.
E-mail: katarina.chovancova@umb.sk
[4] Faculty of Arts, Department of Slovak Literature and Literary Science
Mgr., PhD.
E-mail: martina.kubealakova@umb.sk
[5] Faculty of Education, Department of Social Work
Mgr., PhD.
E-mail: jana.solcova@umb.sk

Abstract. This paper presents experiences with implementation of service-learning at Matej Bel University in Banská Bystrica. It briefly describes the bases of service-learning implementation into education and analyses the results of a questionnaire survey carried out among our students identifying their needs.

Keywords: service-learning; student; school; community, Matej Bel University in Banská Bystrica.

Introduction

Voluntary service in Banská Bystrica has a long tradition institutionalised in 2000 by establishing a citizens' association called *Centre for Volunteer Activities*. "Its establishment originated from the need to connect people who wanted to work as volunteers with organizations which needed volunteers. Another impulse for establishment of the *Centre for Volunteer Activities* was an effort to raise enthusiasm and affection towards voluntary work especially in young people and to make it more accessible to all citizens."[*] This systematically and purposely carried out activity is related to a programme called *service-learning*. Its research conducted in the USA shows that service-learning "can contribute not only to development of society, communities and individuals to whom this help is directed but it can also be an important means of self-development of volunteers, i.e. students" (Brozmanová, 2013). This fact, connecting school, students and community and their needs through service-learning, indicates an interest in applying this strategy into the environment of the Slovak school system.

The Faculty of Arts of Prešov University is among the first schools in Slovakia that are trying to implement the strategy of service-learning into education. According to M. Lipčaková and T. Matulayová (2012, p. 189) "the purpose of this project is to test a new elective course called *Service-learning* available at the Faculty of Arts of Prešov University in Prešov. Its aim is to improve cooperation between the University and organizations of third sector using a new form; to connect theoretical education with the needs of practice and community; to apply modern teaching concepts into university system of education. Among the other aims there are: application of acquired knowledge in practice; propagation of volunteering and civil participation among students and teachers of the University; community development and development of social services; increasing quality of life of social service recipients etc. [...] Within the scope of this course the students work for approx. 26 hours in a particular facility. [...] We are planning to extend the offer of voluntary work to all areas, not only to social services." However, despite the efforts to distinguish service-learning from volunteering, the boundary between these two approaches tends to vanish when they are applied or at least considered to be applied in practice.

The students of Matej Bel University in Banská Bystrica are being engaged in volunteering for more than ten years. The aim is not only to increase engagement of students in voluntary activities during their university studies but also to apply their experience in educational process and to develop their social responsibility and engagement which will also be transferred to their professional practice. Since 2000 voluntary activities of students are organized in tight cooperation with citizens' association *Centre for Volunteer Activities*. Voluntary activities of students are used within the scope of some fields of study (for example in Social Work) at Matej Bel University as alternative forms of practical professional training and their performance is supported and appreciated in various ways. Since the academic year 2005/2006 voluntary activities are integrated into selected disciplines as alternative activities within the scope of courses in terms of service-learning concept.

Since 2013 we are implementing a concept of service-learning into various models and courses within the frame of the project *Development of innovative forms of education at Matej Bel University in Banská Bystrica* supported by EU founds. While applying this educational strategy the research team under direction of Alžbeta Brozmanová Gregorová primarily uses findings and practical application in the USA which is adapted for domestic conditions. The team is also aware of the fact that service-learning is a guided and targeted process that is performed to the benefit of oneself and the others, with a degree of responsibility of those who are involved, related to education and always reflected. It differs from the professional practice mainly by voluntariness, broader extent of activities and competences.

As far as service-learning is concerned, it is important to emphasize that it is an intersection of the needs of students, community and organization (school). This method is aimed not only at the process of teaching but also at the process of learning; therefore, service-learning at Matej Bel University in Banská Bystrica is defined as **an active strategy of teaching and learning based on the service to the benefit of others aimed at forming civil responsibility and personality development**. This conception clearly implies that the performance itself is necessarily preceded by defining the needs of students, community and organization, and afterwards the activity fulfilling all discovered needs is created/sought.

Analysis of findings related to implementation of service-learning at Matej Bel University in Banská Bystrica

In accordance with such understanding of service-learning strategy a questionnaire survey was carried out among the students of Matej Bel University in Banská Bystrica in May 2013. Its aim

[*] http://www.centrumdobrovolnictva.sk/o-nas [2013-10-28]

was to identify the needs and preferences of the students in relation to implementation of service-learning into their education.

A total of 316 respondents participated in the survey: Faculty of Humanities (56 %), Faculty of Education (28 %) and other faculties of the University (15 %). The highest percentage of participants was from bachelor's (69 %) and master's (26 %) degree programmes. Furthermore, 14 postgraduate students (4 %) took part in this survey. With regards to the dominance of the Faculty of Humanities and the Faculty of Education and to their study programmes, 84 % of participants were women.

84 % of all respondents would participate in service-learning activities if they were included in university studies regardless of being carried out within the scope of an existing or an independent course. Their interest was a prerequisite for further possibilities of implementation of this strategy into education at Matej Bel University in Banská Bystrica.

Second part of questions was aimed at identification of students' needs which influenced selection of preferred activities, areas and forms of performance[*].

According to table T1 more than a half of respondents would expect this strategy implemented into education at Matej Bel University to develop their communication skills, to use theory in practice, to develop interpersonal relations, project management skills, and organizational skills. Another important skill to be developed is working in a team, as it was also chosen as preferred form of working (only 6 % of respondents would prefer to perform voluntary activities individually), as well as team leading and coordinating. Special attention was paid to expectations of students cited in the middle of the table. Those are intrapersonal needs such as self-knowledge, development of responsibility and self-reflection, increasing motivation, sense of being needed and sense of personal success. It turns out that students assign importance not only to development of their knowledge and skills (communication, project managing, team work etc.) but also to development of their personality in general.

T1 Students' expectations from implementation of service-learning into education at Matej Bel University

development of communication skills (ability to empathize with others, to listen actively, to know how to express one's opinion, to lead a constructive dialogue...)	214	68%
use of theory in practice	176	56%
meeting new people, development of interpersonal relations	174	55%
development of project management skills (to plan an activity/event, to carry it out, to evaluate it, to prepare a budget)	167	53%
development of organizational skills	155	49%
fun	153	48%
relax, stress elimination	153	48%
learning how to work in a team	146	46%
getting to know different culture(s)	144	46%
real experience with various target groups (young people, children, elderly people, severely disabled people...)	146	46%
development of team leading and coordinating skills	141	45%
self-knowledge	117	37%
learning in different environment	118	37%

[*] Some questions are cited here for illustrative purposes: *If voluntary activities were integrated in your education, what would you expect from participation in these activities? Do you think that it is possible to interconnect any of your university courses with volunteering? Which voluntary activities as a part of your university studies would you prefer? Which target groups would you like to work with? In which area would you like to perform your voluntary activities?* For the sake of better intelligibility of the questionnaire we were using a term *voluntary activity*. However, at the beginning of the questionnaire we gave an explanation of the term *service-learning*.

opportunity to do things I am good at	116	37%
development of responsibility	111	35%
elimination of stereotypes	111	35%
increasing motivation	112	35%
learning how to solve interpersonal conflicts	103	33%
sense of being needed	97	31%
development of self-reflection	92	29%
sense of personal success	93	29%
credits and points	93	29%
development of presentation and propagation skills	88	28%
improving the physical condition	76	24%
development of self-respect	72	23%
learning how to work with documentation	71	22%
development of partnership and parenthood skills	62	20%
being a part of the team	59	19%
development of functional literacy (for example reading comprehension)	58	18%
development of ecological thinking	54	17%
participation in improvement of services at local level	53	17%
being excused from school	35	11%
other	2	1%

The most preferred activities within the scope of service-learning students would take part in were organizing or helping with activities or events, organizing and coordinating leisure activities. These activities were preferred to lecturing, counselling, environmental protection, conservation and restoration, animal care and protection of free-living animals. The minimum interest was shown in advocacy of rights of particular groups of people, supporting and helping oppressed or threaten people or people who couldn't get what they were entitled to, getting financial resources, approaching donors, active participation in organizing fundraising events. Thus, the most preferred area is art and culture, education and research. We suppose that this is caused by the above mentioned focus of study of the majority of respondents attending faculties of pedagogical specialization, even though recently (in last 10 years) they tend to choose non-pedagogical study programmes.

Despite the fact that 40% of respondents are interested in helping within the area of social services for children, young people and family, severely disabled people, elderly people, and other groups; 86% of respondents are interested in service-learning; and 46% of respondents are interested in getting to know different culture or having a real experience with a particular target group (young people, children, elderly people, severely disabled people...), they do not have an inclination to work with *diversity*.

Without an effort to discover the reasons respondents are interested in working with healthy people, mainly at the age of 30 or with children and young people from socially disadvantaged environment. One fourth of respondents are interested in working with target group of elderly people, oncological patients and disabled people. The respondents showed the smallest interest in working with drug users, homeless people, people with mental illness, and finally children and young people from Gypsy communities.

Models of application of service-learning at Matej Bel University in Banská Bystrica

In academic year 2013/2014 on the basis of identified needs of the students we apply the strategy of service-learning within the scope of three courses. Within the course called *Third Sector and Non-Governmental Organizations* we continue in application of service-learning based on students' experiences and reflections obtained in previous period. Within the course *Methodology of Sciences of Man* we apply service-learning for the first time. A new course created by research team is a two-semester course called *Service-Learning* responding in a complex way to various identified needs and preferences of the students.

At the beginning of academic year the students are given information about the aims of these three courses, their content and assessment. One part of these courses is carried out in particular community. If a student doesn't want to participate in working in community, she/he can perform an alternative task (except for the course *Service-Learning* where all students are obliged to take part in working in community and they are informed about these course requirements in advance).

There are several kinds of activities offered for communities:

– activities are planned in advance with organizations we cooperate with for some time;

– activities respond to the needs of organizations that were addressed for cooperation but the way of their performance is determined by students;

– activities are planned and created by students on the basis of known needs of community or the needs identified by a survey that was carried out by these students.

We further analyse the system of integration of service-learning elements on particular examples within the scope of above mentioned three courses.

The first one is a two-semester elective course **Service-Learning**. In this academic year 51 students of all degrees in various study programmes enrolled on this course. The aim of this course is a development of students' competences (knowledge, skills and attitudes) necessary for performance of activities to the benefit of other people. The students learn how to work in a team, to plan activities, to propagate, to communicate appropriately, to plan in time, to prepare a budget, to carry out and evaluate an event. Its theoretical part consists of two ten-hour blocks where the students are guided by the research team: What is service-learning?; Work in a team; Planning; Propagation; Communication; Planning in time; Budget preparation; Performance and evaluation of activities. Using creative and activation methods of education the students acquire theoretical knowledge and practical experiences with group dynamics and team roles; they realize the need of thorough planning and planning in time; practical analysis enable them to discover the necessity of correspondence of the target and target group with selection of propagation tool; they practise communication by model situations; they obtain budget preparation skills. The reflection is an important tool of self-image and evaluation of each activity. From the very beginning it is not only about theory but also about practical application (group task after the first block and its reflection in the second block) which leads to realization of the fact that it is necessary to perceive all teaching blocks as an inseparable unit and absence or underestimation of any of them results in failure to accomplish an event/activity.

In the second phase of the course the students form groups and are asked to identify their own needs, the needs of community and school and to create an activity that will fulfil discovered needs no later than at the end of the summer semester of the corresponding academic year. They continue to cooperate with their teachers in the form of tutoring/mentoring and at least twice a month they consult them about suitability of chosen activity, its planning, performance and evaluation. Ideally, they go through all phases (steps) of service-learning in one academic year – preparation, event, reflection, evaluation and celebration. At the end of summer semester all students meet in order to present their accomplished activities and their outcomes, to reflect their own process of learning and to evaluate the whole course.

The second course, where the concept of service-learning is integrated since the academic year 2013/2014, is **Methodology of Sciences of Man**. Here all phases of this concept – preparation, event, reflection, evaluation and celebration – are followed as well. The aim of this course is to obtain knowledge and skills necessary for carrying out a quantitative research in the field of social work. While having lectures on Research Methodology the students are required to prepare and carry out surveys based on the needs of practice. For the analysis of the needs we have addressed several professional departments from the field of social work, regional and local self-government and based on these needs we have compiled a list of research topics. The students are divided into groups and their task in the course of the semester is to prepare a research project, to carry out the research, to make an analysis and interpretation of research findings, and to write a final report for the needs of a particular organization.

The third model of service-learning implementation at Matej Bel University is its application into the course **Third Sector and Non-Governmental Organizations**. This application is being performed for several years now, thus we can present specific reflections of our students.

Within the scope of the course *Third Sector and Non-Governmental Organizations* the students can obtain given number of points for writing and presenting a seminar paper on *"Gaining Resources in Third Sector - Fundraising"* or they can participate in fundraising event organized by various organizations. In last few years the Department of Social Work of Faculty of Education at Matej Bel University in Banská Bystrica and the Centre for Volunteer Activities cooperate on fundraising events with several organizations, namely with the Slovak Blind and Partially Sighted Union "White Crayon", with the League for Mental Health on the event called "Days of Forget-me-nots", with UNICEF on the event called "Blue Button", with SOCIA foundation on the event called "Ladybird", and with The Children's Hour.

Participation in fundraising event is chosen by 95% of students. Before every fundraising event itself, there is a theoretical preparation consisting of two parts:

–in the first part the students attend a lecture on fundraising – conditions of organizing that an organization needs to fulfil in order to be able to carry out such fundraising activity and what are its duties before, during and after this activity;

–in the second part the students are acquainted with a particular fundraising event, its organization and their duties.

After preparation phase the students participate in fundraising event and after that they reflect on their experiences through seminars and written self-reflections. The reflection is aimed at gained knowledge and skills, positive and negative experiences. At the same time we deal with the topic of donation focusing on who are donors, what motivates people to donate, what factors make people donate money.

The students evaluate participation in fundraising events very positively. They appreciate mainly particular knowledge and skills gained as volunteers such as organization of such activity and communication with potential donors. While during theoretical preparation the students can't imagine organizing such activity on their own, after participation in fundraising event they have a real idea of it and they feel they could manage it. Collected money for people who need them is an "added value". The sum of money collected at each fundraising event is always revealed to students and announced at the end.

The assets of service-learning implementation into education on third sector are documented by students' feedback in the form of final evaluation of the course Third Sector and Non-Governmental Organizations that is also related to reflection of assets of service-learning activities:

–"I have found out how many people need help."

–"I like the connection between theory and practice."

–"We could try some of activities performed by NGOs."

–"I have discovered lots of important information on NGOs through practical experience."

–"I have obtained lots of new experiences."

–"Alternative tasks are great experiences for life."

–"I am glad you have mobilised us."

–"I am happy I could participate in practical tasks."

–"I have learnt to cooperate with people I don't get along with well."

–"I have found out that many people are egoists, with few exceptions, but it didn't discourage me."

–"I have learnt to accept refusal."

–"We always do something, some activities. I need a rest."

–"Everything we had learnt at school we have applied in practice and on seminars. It helps to remember."

–"This course has aroused my interest in third sector and in my further options."

–"I liked activities that made us think not only passively receive information."

–"I don't like the fact that some people participate in these activities not because of their own conviction but for credits."

–"I feel good about work I have done and help to other people."

Our experiences with implementation of service-learning concept at Matej Bel University in Banská Bystrica show that service-learning strategy presents one of possibilities how school can get closer to community and respond to its needs and how students can obtain competences necessary for their future profession, develop key competences necessary for labour market, get involved, and be active to the benefit of community.

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1189-1193, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

Medical Sciences

Медицинские науки

UDC 617.3

Possibilities of the Videothoracoscopy for the Post-Traumatic Clotted Hemothorax

[1] Shavkat I. Karimov
[2] Ulugbek B. Berkinov
[3] Erjan R. Fayzullaev
[4] Yuliya V. Khamidova

[1] Tashkent medical academy, Uzbekistan
Tashkent, Farobiy street – 2, 100109
Rector of the Tashkent medical academy, Academician
[2] Tashkent medical academy, Uzbekistan
Tashkent, Farobiy street – 2, 100109
Dr. (Surgery) Docent
E-mail: ulugbek_b@mail.ru
[3] Tashkent medical academy, Uzbekistan
Tashkent, Farobiy street – 2, 100109
E-mail: erik1991@mail.ru
[4] Tashkent medical academy, Uzbekistan
Tashkent, Farobiy street – 2, 100109
master
E-mail: julia_arrow@mail.ru

Abstract. Background. Among the complications of blunt thoracic trauma, hemothorax is the most common and serious problem of modern thoracic surgery. The frequency of this complication according to some authors, varies from 26% to 80% and is not connnected with nature of the trauma and patient's age.

804 patients with the chest injuries treated between 2006 and 2012 at the 2nd clinic Tashkent Medical Academy. 179 of patients had penetrating stab wounds, and 625 - blunt. The clotted hemothorax was diagnosed at 103 patients.

For all the patients with clotted hemotorax we performed videothoracoscopy. All the operations were ended with thoracostomy. Intraoperative complications were not observed. Postoperative complications were observed in 10 (10.2%) patients. In one case developed empyema, and in 9 - limited pleurisy.

Inclusion of the videothoracoscopy into the complex diagnostic and treatment algorithm for the patients with chest injuries allows not only to confirm the presence of the CH, but to eliminate it highly effectively and with minimal invasion, avoiding thoracotomy.

Keywords: chest injury; blunt thoracic trauma; stub wounds; clotted hemothorax; videothoracoscopy; video-assisted interventions.

Introduction

The thoracic injuries perform one the most severe forms of trauma and also a leading cause of morbidity and mortality. In the vast majority of traumatized patients, the traumatic force is applied to and through the chest wall, making trauma to the ribs and sternum.This kind of injury is the most common of all thoracic injuries and therefore is considered to be a subject of considerable importance. [1, 7]

Thoracic trauma represents a major diagnostic and therapeutic challenge to surgeons. Accurate assessment and treatment require detailed knowledge of the protean manifestations resulting from thoracic injuries. The trauma is known to be a leading cause of death in the first four decade of life. [3, 10]

Among the complications of blunt thoracic trauma (BTT), hemothorax is the most common and serious problem of modern thoracic surgery. The frequency of this complication according to some authors, varies from 26% to 80% and is not connected with the nature of the trauma and patient's age. In 0.5-30% of patients in this category further clotted hemothorax (CH) develops, leading, as known, to the collapse of the lung and mediastinal shift, contributing to the development of respiratory and heart failure, and at a later date – the development of empyema is observed in 50 % of cases. [2, 9]

It should be noted that, nevertheless, the true frequency of the CH, especially small volume that has no appreciable clinical and radiological symptoms, but is the cause of septic complications of chest trauma has not been fully established till nowadays. [1, 4, 8]

Using ultrasound, CT has extended the diagnostic of CH at chest trauma, but their ability, in some cases, are limited. [1]

Rapid improvements in endoscopic surgical technique and instrumentation expanded the indications of videothoracoscopy in the diagnosis and treatment of diseases of the chest, but its use remains controversial in the trauma setting. As well the role of thoracoscopy continues to expand in the practice of thoracic surgery, it is expanding in the management of the trauma patients. Thoracoscopy had added a new tool for diagnosis and therapy in the setting of both penetrating and blunt trauma. [1, 5, 6]

Recent publications suggested the interest of videothoracoscopy for the diagnosis or treatment of traumatic diaphragmatic injuries, clotted hemothorax, or continued hemothorax in hemodynamically stable patients. The introduction of the video endoscope technology into the diagnostic algorithm of patients with blunt thoracic trauma allowed not only to improve the diagnosis of CH, but also get a good therapeutic effect. In this regard, the study of the treatment results within patients with post-traumatic CH with using of videothoracoscopy is of particular interest. [1, 10]

The value of thoracoscopic (VATS) techniques in the treatment of CH has been examined by several investigators. These small series have shown that VATS is an effective method of intervention, particularly if utilized “on early stage”. Intrapleural fibrinolysis has also shown promise in single and multicenter trials for the treatment of CH following trauma. However, only one brief, retrospective study has directly compared the use of VATS and intrapleural thrombolysis in the treatment of CH to date. [3, 5, 7]

Material and methods

Between 2006 and 2012 the 2nd clinic Tashkent Medical Academy turned 804 patients with chest injuries. At the same time, 179 of them had penetrating stab wounds, and 625 - BTT. The CH was diagnosed at 103 patients of them.

The incidence of CH after penetrating stab wounds was higher and occurred at 42 (23.4%) of patients, whereas in patients with closed injuries it observed at 61 (9.7%) patients.

Age of victims ranged from 16 to 84 years, and in the age group up to 45 years CH was marked mainly after penetrating stab wounds, while at the BTT, this complication was observed mainly in the age of 45.

Among the victims 89 were males (85%), 14- females (14.9%).

Results and Discussion

One of the main factors contributing to the formation of CH in patients with chest injuries was late delivery (over 24 hours).

Revealed the following relationship: the later the patient applies to the hospital, the higher is the probability of detecting it CH. Although the CH after the stab wounds occurred in early terms too. The relationship between the time of hospitalization and type of the trauma is shown in Table 1.

Table 1: Relationship between the frequency of the post-traumatic hemothorax and terms of the hospitalization of the patients with chest injuries

Terms of hospitalization	Penetrative stub wounds		Blunt thoracic trauma		Total number of CH
	Number of the patients	Number of CH (%)	Number of the patients	Number of CH (%)	
To 6 hours	129	16 (12,4%)	90	0	16 (7,3%)
To1 day	32	11 (34,4%)	377	16(4,2%)	27 (6,6%)
To3 days	7	5 (71%)	67	5 (7,5%)	10 (13,5%)
To5 days	5	4 (80%)	42	11 (26,2%)	15 (31,9%)
To10 days	3	3 (100%)	28	14 (50%)	17 (54,8%)
over 10 days	3	3 (100%)	21	15 (71,4%)	18 (75%)
Total	179	42 (23,4%)	625	61 (9,7%)	103 (12,8%)

It should be noted that the patients with stab wounds in time for more than 3 days, were received mainly from other clinics, where they were executed on first surgical processing without identification of the penetration.

Another important factor in the development of CH, to our opinion, was a violation of the function of the drainage introduced into the pleural cavity. Thus, from 187 cases of drainaged pleural cavity because of hemothorax or pneumo-hemothorax for the BTT, at 8 in the future, due to prolonged passive aspiration or compression of the drainage, CH developed.

The cases of CH after BTT were often marked at multiple rib fractures, when high opportunity of development of the pneumo-hemothorax exists. Thus, when a single rib fracture or without it, CH developed at 18 (29.5%) patients with BTT, when the plural –at 43 (70.5%).

Thus, the major risk factors for development of CH at the patients with chest injuries in our study were: late hospitalization of the patients, a violation of the established into the pleural cavity drainage and the presence of multiple rib fractures.

Examination of patients with CH at the BTT, as well as the patients with the stab wounds at the late terms of the hospitalization, was complex and involved general clinical examination, laboratory, and noninvasive (ultrasound, radiography, CT) and invasive (puncture of the pleural cavity, videothoracoscopy) methods.

In the cases of penetrating stab wounds in terms before the 1st day after injury and stabile hemodynamic, was performed urgentvideothoracoscopy. So urgent videothoracoscopy was performed in 161 cases with the identification of the CH andvideothoracoscopic liquidation of it at 27 cases.

Among 76 patients the CH was diagnosed correctly with assistance of clinical and X-ray methods in 28 cases, mainly when its volume was more than 500 ml. The sensitivity of this method to identify the CH according to data of the original study was 37%.

Basing on ultrasound, it was possible to suggest the presence of CH from this number of patients in 65 cases, while the diagnosis was established, regardless of its volume. At the same time, ultrasound was not effective in case of subcutaneous emphysema. The sensitivity of this method to identify the CH was 85.5%.

The puncture of the pleural cavity allowed to confirm the presence of CH. The reliable sign of CH at a puncture of the pleural cavity was the identification of the clots in aspirated blood. Furthermore, to suggest the presence of the CH was possible from significantly lower volume of aspirated blood than was anticipated before.

In doubtful cases, and when was necessary to determine the volume of CH was performed CT of the thorax. This technique has revealed CH at 31 patients among 32 cases. The sensitivity of the CT in the detection of CH was 97%.

Thus, basing on the effectiveness of non-invasive methods of examination, we can conclude that only CT has high resolution capabilities in identifying of CH. Although ultrasound, in case of subcutaneous emphysema absence, may be the screening method in its diagnosis.

With the help of preoperative methods of investigation, we were able to identify the presence of CH at 75 patients among 76 cases. In one case, the diagnosis of CH was established only during videothoracoscopy undertaken regarding the post-traumatic hemothorax.

The treatment intervention in patients with CH started with videothoracoscopy. Only at 5 patients with small volume of CH and very hard general condition was performed conservative treatment, which consists of thoracentesis for local pleuroclysis. Fibrinolytics on background of antibacterial therapy were introduced into the pleural cavity for the lysis of CH.

Thus, 98 patients were undertaken videothoracoscopic intervention (VTI).

The technique of its performance was the following. The first trocar for optics was introduced in the most remote from the localization of CH area. Only in cases of stab wounds at the early terms (up to 6 hours), the trocar was introduced with closed method, in a standard point - the 5th intercostal space by the mid-axillary line. Then we introduced two working trocars, respecting the principle of the triangle. The blood clots were fragmented with the endoscopic clip, and then aspirated with the endo-aspirator. We usually used for aspiration "Bryusan" type.At the cases of identifying the wounds in the lungs or chest wall, the correction has been performed by videothoracoscopy: VATS stop bleeding from an intercostal artery (26 cases), suturing wounds of the lung (25 cases) and other. All the operations were ended with thoracostomy.

From 98 cases taken VTI, at 86 patients we continued minimally invasive surgery. In 12 cases there was a need of conversion. The cases of conversion directly depend on the period of the development of the CH. Types of surgical procedures performed for the posttraumatic CH SG are reflected in Table 2.

Table 2: Types of performed surgical interventions for the posttraumatic CH depending on the time of its development

Time of the development of the CH	Videothoraco scopicintervantion	Video-assisted intervention	Thoracotomy	Total
To 1 day	22	19	1	42
To 3 days	8	1	1	10
To 5 days	13	1	0	14
To 10 days	12	2	0	14
Over 10 days	0	8	10	18
Total	55	31	12	98

As performed in Table 2, in terms of up to 10 days almost all patients undertaken VTI ,the procedure completed with minimal invasion . Cases of conversion in these terms were associated with the need of suture of the wounds of mediastinum.

In terms of more than 10 days clot was usually infected, fibrin has settled at parietal and visceral pleura and developed adhesive process, which was difficult to destroy. In this connection it was necessary to perform the partial pleurectomy, which we performed in 10 of 18 cases by wide thoracotomy. In 8 cases this volume of intervention was done with video-assisted intervention.

Intraoperative complications were not observed by us. (during the study)

Postoperative complications were observed in 10 (10.2%) patients. In one case developed empyema, and in 9 - limited pleurisy.

In case of pleural empyema further pleurectomy and decortication were performed by thoracotomy. Limited pleurisy was eliminated by conservative methods. It should be noted that the majority of occurred complications (6 of 10) were after the video-assisted interventions performed in terms of more than 10 days after injury.

Fatal outcome occurred in one case because of acute myocardial infarction.

Conclusions:

1. The main causes of CH after chest injury are: late hospitalization of the patients, a violation of the established drainage into the pleural cavity, and the presence of multiple rib fractures.
2. CT has the high diagnostic sensitivity among the non-invasive methods of diagnosis.
3. Inclusion of the videothoracoscopy into the complex diagnostic and treatment algorithm for the patients with chest injuries allows not only to confirm the presence of the CH, but to eliminate it highly effective and minimally invasive, avoiding thoracotomy, according to our data, in 88% of cases.
4. Optimal terms of videothoracoscopic liquidation of the CH are up to 10 days from the time of its development. Performing of the VATS intervention in a later terms, in most cases, accompanied by complications and conversion, respectively, were observed in 10 (10.2%) and 12 (12.2%) cases.

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Published in the Russian Federation
European Researcher
Has been issued since 2010.
ISSN 2219-8229
E-ISSN 2224-0136
Vol. 77, No. 6-2, pp. 1194-1212, 2014

DOI: 10.13187/issn.2219-8229
www.erjournal.ru

Art History

Искусствоведение

UDC 372

Russian Image on the Federal Republic of Germany Screen*

Alexander Fedorov

Anton Chekhov Taganrog State Pedagogical Institute, Russian Federation
Professor, Doctor (Pedagogy)
E-mail: mediashkola@rambler.ru

Abstract. This article analyzed the image of Russia in the screen mirror of the Federal Republic of Germany for: determine the place and role of the image of the USSR and the Russian and Soviet / Russian characters in the movies from the beginning of the postwar German ideological confrontation to 1991 (the collapse of the Soviet Union) as compared with the trends of the modern era (1992 – present); identify political, ideological, social and cultural contexts, the main stages of development, concepts, goals, objectives, authors of fiction films themes outlined above; classify and compare trends and stereotypes German films related to the Soviet / Russian theme: ideology, content model, genre modifications (including: socio-political analysis, stereotypes, ideological analysis, identification analysis, the iconographic analysis, narrative analysis, the characters etc.).

Keywords: cold war; Russian image; Federal Republic of Germany; screen; films.

Inroduction

My article relies on research content approach (study of the process content with the whole complex of its elements, their interactions and character, reference to facts, analysis and synthesis of theoretical findings, etc.), on historical approach – study of concrete historical development of the claimed topic in the Federal Republic of Germany feature cinematograph. For this purpose I use both theoretical research methods (classification, comparison, analogy, induction and deduction, abstraction and concretization, theoretical analysis and synthesis, generalization) and empirical research methods (data acquisition connected with the research subject matter). The efficiency of such methods has been proved by western (R. Taylor, T. Shaw, D.J. Youngblood, A. Loughton, et al.) as well as Russian scholars (N. Zorkaya, E. Ivanyan, M. Turovskaya, A. Chubaryan, et al.).

* This article is the result of the research with the financial support of DAAD grant 2014 (Forschungs- und Arbeitsaufenthalte Ausländischer Hochschullehrer und Wissenschaftler Wiedereinladungen für ehemalige Stipendiaten / Study visits of foreign academic personnel to the Federal Republic of Germany).

It is well-known that the interpretation of media texts is changeable and subject to variations of political policies. After the peak of the ideological confrontation of the late Stalinism era and the peak of McCarthyism (1946-1953) when screen *enemy images* were full of mutual malicious grotesque, the Thaw period of the mid 1950s – the early 1960s turned the situation of the ideological confrontation in media production in the direction of a more verisimilar representation of a *potential enemy*. Both western and Russian scholars frequently noted that there were always enough excuses for ideological and media confrontation (Bernin-Maghit, 2008; Bozo et al, 2008; 2012; Clarke, 2006; Davidson and Sabine, 2009; Ginsberg and Kirsten, 1996; Hilman, 2005; Keen, 1986; LaFeber, 1990; Levering, 1982; Maguire, 2012; Manvell, 1971; Murray and Christopher, 1992; Pflaum, 1990; Rentschler, 1986; Robin, 1999; Rukavishnikov, 2000; Shaw and Youngblood, 2010; Shenin, 2003; Strada and Troper, 1997; Klimontovich, 1990; Kolesnikova, 2008; Turovskaya, 1993; 1996). But each of the opposing sides preferred to choose the most advantageous facts (in their favor) passing over *black spots* in silence.

That explains the violent storm of angry accusations of bourgeois cinema vices as well as the western world in general which raged in Soviet scientific and journalistic literature devoted to the problem of the *ideological struggle on the screen*. At the same time, "propagandists possessed all the necessary premises and conditions for the creation of the information reality suitable for the USSR administration: experience, state monopoly on mass media and information itself, citizens' confidence in the government and newspaper messages, a low level of political culture and literacy of some part of the population, traditional distrust of the West" (Fateyev, 1999).

It is true that one could often run across single-valued passages in the works of more liberal Soviet film critics meant for Soviet viewers who had never seen anti-Soviet films, and who had never attempted to reach the level of comparative analysis of media stereotypes *on both sides of the Iron Curtain*.

However, the evolution of Western film texts interpretations by Soviet and Russian critics is a subject for further research. In this article I will try to analyze the image of Russia through the Federal Republic of Germany feature films' view.

The objectives of my research are:

- to define the place and role of the Russian image transformation topic in the Federal Republic of Germany cinematograph from 1946 (the beginning of the post-war ideological confrontation) to 1991 (the Soviet Union disintegration) versus the tendencies of the modern age (1992-present);
- the study of the political, ideological, social and cultural contexts, the principal development stages, concepts, aims, objectives, authors' conceptions of my research topic interpretations on the Federal Republic of Germany screen;
- classification and comparative analysis of the Federal Republic of Germany films' trends and stereotypes connected with the Russian image interpretation: ideology, content models, genre modifications (including: social and political analysis, stereotypes analysis, ideological analysis, representation analysis, identification analysis, iconographic analysis, narrative analysis, character analysis).

Analysis and the interpretation of the Federal Republic of Germany films connected with the Russian image interpretation and scientific literature about the research topic are very important. Because without those it is impossible to arrange, to systematize, to investigate contexts, basic stages, directions, purposes and tasks, contents, genre models, etc. of the development of the research theme.

I analyzed the image of Russia in the screen mirror of the Federal Republic of Germany for:

- determine the place and role of the image of the USSR and the Russian and Soviet / Russian characters in the movies from the beginning of the postwar German ideological confrontation to 1991 (the collapse of the Soviet Union) as compared with the trends of the modern era (1992 - present);
- identify political, ideological, social and cultural contexts, the main stages of development, concepts, goals, objectives, authors of fiction films themes outlined above;
- classify and compare trends and stereotypes German films related to the Soviet / Russian theme: ideology, content model, genre modifications (including: socio-political analysis,

stereotypes, ideological analysis, identification analysis, the iconographic analysis, narrative analysis, the characters etc.).

Cinematographic feature films stereotypes associated with Soviet / Russian theme and Soviet / Russian characters, set and published on the movie / TV screens in Federal Republic of Germany in the years 1946-1991, i.e. during the existence of the USSR Structure and genre stereotypes of dramas

-historical period, locale: any length of time until 1992, Russia / USSR, DBR / DDR / Germany and other countries;

- *furnishings, household items:* a modest dwelling and household items Soviet characters, comfortable home and everyday objects German characters and many of the characters of the Russian Empire. However, if the action takes place on the World War II or in the Soviet or Nazi camps, the living conditions of both Soviet and German characters quite ascetic;

-methods of depicting reality: moderately realistic (to a greater extent it concerns the image of Russia and Russian characters until 1917) or quasi-grotesque depiction of life in Russia and the USSR;

-characters, their values, ideas, clothes, physique, vocabulary, facial expressions, gestures: positive characters - carriers of democratic ideas; negative characters - inhuman , militaristic ideas. Characters shared not only social, but often material status. Separated by ideology and worldview (bourgeois, communist, Nazi), characters, usually filed according to the settings of a media source: most Soviet and Nazis characters shown rude and cruel fanatics with a primitive vocabulary forever scowling faces, active gestures and unpleasant voices scream ... Characters of the Russian Empire or the Russian immigrants are often shown on the positive side. But some of the Soviet characters (e.g. prisoners of concentration camps) may also be shown on the positive side;

- *significant change in the lives of the characters:* the negative characters are going to put their inhumane ideas;

- *problems encountered:* the life of positive characters, or the life of entire nations / countries under threat;

- *finding solutions to the problem:* the struggle beatween of negative and positive characters;

- *solution:* the destruction / arrest the negative characters, the return to civilian life.

Representative examples of films: *Doctor from Stalingrad* (1958), *Stalingrad* (1963), *Escape from Taiga* (1967), *Escape to the Sun* (1972), *Cross of Iron* (1977), etc.

Structure and genre stereotypes of detectives and thrillers

-historical period, locale: any length of time until 1992, Russia / USSR, DBR / DDR / Germany and other countries;

- *furnishings, household items:* a modest dwelling and household items Soviet characters, luxury dwellings and household items Western characters (however, in the territory of the country hostile spies adapted to the housing and living conditions of the opponent);

- *methods of depicting reality:* as a rule, conditional grotesque depiction of the lives of people "hostile states" .

- *characters, their values, ideas, clothes, physique, vocabulary, facial expressions, gestures:* positive (border guards, counterintelligence, spies, civilians Germany) and negative (the same persons, but Soviet citizens or Nazi). Separated by ideology and worldview (bourgeois, communist, Nazi) characters tend to have a strong constitution and look according to the settings of a media source: Soviet spies may at some timeto look pretty, but then be sure to find its ugly essence. Soviet characters (border guards, heads of the KGB, etc.) are shown gross and cruel fanatics with a primitive vocabulary forever scowling faces, active gestures and unpleasant voices scream ...

- *significant change in the lives of the characters:* the negative characters are committing a crime (illegal border crossing, sabotage, espionage, blackmail, theft of state secrets, murder);

- *problems encountered:* violation of the law;

- *finding solutions to problems:* crime investigation, prosecution negative characters;

- *solution:* positive characters expose / catch / destroy negative.

Specific examples of the movie: *The Spy* (1965), *Charlie Muffin* (1979), etc.

Structure and genre stereotypes of melodramatic films

-historical period, locale: any length of time until 1992, Russia / USSR, DBR / DDR / Germany and other countries;

- *furnishings, household items:* a modest dwelling and household items Soviet characters, comfortable home and everyday objects German characters.

- *methods of depicting reality:* as a rule, conditional grotesque in relation to the lives of people "hostile states" .

- *characters, their values, ideas, clothes, physique, vocabulary, facial expressions, gestures:* male and female characters with contrasting ideological and social status. Characters tend to have slender physique and looks quite nice. Their clothing, language and facial expressions are "average" framework;

- significant change in the lives of the characters: a meeting of male and female characters;

- *problems encountered:* ideological and social mesalliance;

- *finding solutions to the problem:* the characters overcome the ideological and social obstacles to their love;

- *solution:* wedding / love harmony, or death, separation of these characters.

Representative examples of films: *No Way Back* (1953), etc.

Structure and genre stereotypes of comedy films

-historical period, locale: any length of time until 1992, Russia / USSR, DBR / DDR / Germany and other countries;

- *furnishings, household items:* a modest dwelling and household items Soviet characters, comfortable home and Houseware western characters;

- *methods of depicting reality:* as a rule, conditional grotesque in relation to the lives of people from "enemy states";

- *characters, their values, ideas, clothes, physique, vocabulary, facial expressions, gestures:* Soviet and Western characters with contrasting ideological and social status. They look as set sources of media texts: Soviet characters (unless of course they have not conceived flop to the West) are shown with vulgar fanatics primitive vocabulary forever scowling faces, active gestures and unpleasant tone of voice;

- *significant change in the lives of the characters:* the characters encountered in the funny / eccentric circumstances in this case, either Western or Soviet characters are on foreign soil;

- *problems encountered:* "culture shock", mutual misunderstanding.

- *finding solutions to the problem:* in a series of funny / eccentric characters situations overcome ideological barriers to understanding.

- *solution:* the harmony of understanding of Soviet and Western characters, colored humor.

Representative examples of films: *Comrade Munchausen* (1962), *Two girls with red star* (1966), etc.

Cinematographic feature films stereotypes associated with Soviet / Russian theme and Soviet / Russian characters, set and published on the movie / TV screens in Federal Republic of Germany in the years 1992-2014, i.e. after the collapse of the USSR Structure and genre stereotypes of dramas

-historical period, locale: any length of time until 2014, Russia / USSR, DBR / DDR / Germany and other countries;

- *furnishings, household items:* a modest dwelling and household items Soviet characters, comfortable home and everyday objects German characters, many of the characters of the Russian Empire , Russian mafia oligarchs from post-Soviet period. However, if the action takes place on the World War II or in the Soviet and Nazi concentration camps, the living conditions of both Soviet and German characters quite ascetic.

- *methods of depicting reality:* moderately realistic (to a greater extent it concerns the image of Russia and Russian characters until 1917) or quasi- grotesque depiction of life in modern Russia and the USSR;

- *characters, their values, ideas, clothes, physique, vocabulary, facial expressions, gestures:* positive characters - carriers of democratic ideas; negative characters - inhuman, militaristic ideas. Characters shared not only social, but often material status, ideology, worldview (bourgeois, communist, Nazi). Characters of the Russian Empire or the Russian immigrants are often shown on the positive side. Nazi characters are negative, Russian / Soviet characters are shown different - as rude and violent types with primitive vocabulary, spiteful persons active gestures and unpleasant tone of voice, and quite goodies protecting example civilians women and children. Soviet characters, such as concentration camp prisoners, may also be shown on the positive side. Characters of modern Russia (mostly - women) can be displayed positive if they are not connected with the secret police, mafia, crime;

- *significant change in the lives of the characters:* the negative characters are going to put their inhumane ideas;

- *problems encountered:* the life of positive characters, or the life of entire nations / countries under threat;

- *finding solutions to the problem:* the struggle between negative and positive characters;

- *solution:* the destruction / arrest the negative characters, the return to civilian life.

Representative examples of films: *Stalingrad* (1993), *Rabbit Hunt* (1994), *Enemy at the Gates* (2001), *Amber Amulet* (2004), *Joy Division* (2006) , *Nameless woman in Berlin* (2008) , *4 days in May* (2010), *Uranium Mine* (2010) , *Miracles* (2011), *Our mothers, our fathers* (2013), etc.

Structure and genre stereotypes of detectives and thrillers

-*historical period, locale:* any length of time until 2014, Russia / USSR, DBR / DDR / Germany and other countries;

- *furnishings, household items:* a modest dwelling and household items Soviet characters (or more is better, when it comes to modern Russia), luxury homes and Houseware western characters, Russian millionres, mafia (in this case, if the movie characters spies, then, being on hostile territory of the country, they adapt to the housing and living conditions of the opponent);

- *methods of depicting reality:* as a rule, several grotesque depiction of life of people "hostile states";

- *characters, their values, ideas, clothes, physique, vocabulary, facial expressions, gestures:* positive (border guards, counterintelligence, spies, civilians Germany) and negative (the same persons, but the Soviet / Russian citizens, the Nazis). Separated by ideology and worldview (bourgeois, communist, Nazi) characters tend to have a strong constitution and look according to the settings of a media source : spyware may at any time to look pretty, but then be sure to find its ugly essence. Soviet characters (border guards, heads of the KGB, etc.) are shown gross and cruel fanatics with a primitive vocabulary forever scowling faces, active gestures and unpleasant voices scream... Russian characters are shown in a more differentiated.

- *significant change in the lives of the characters:* the negative characters are committing a crime (illegal border crossing, sabotage, espionage, blackmail, theft of state secrets, murder);

- *problems encountered:* violation of the law;

- *finding solutions to problems:* crime investigation, prosecution negative characters;

- *solution:* positive characters expose / catch / destroy negative.

Specific examples of the films: *23* (1998), etc.

Structure and genre stereotypes of melodramatic films

-*historical period, locale:* any length of time until 2014, Russia / USSR, DBR / DDR / Germany and other countries;

- *furnishings, household items:* a modest dwelling and household items Soviet / Russian characters , comfortable home and everyday objects German characters of Russian millioners, mafia;

- *methods of depicting reality:* as a rule, conditional grotesque in relation to the lives of people "hostile states";

- *characters, their values, ideas, clothes, physique, vocabulary, facial expressions, gestures:* male and female characters with contrasting ideological and social status. Characters tend to have slender physique and looks quite nice. Their clothing, language and facial expressions are "average" framework;

- *significant change in the lives of the characters:* a meeting of male and female characters;

- *problems encountered:* ideological and social mesalliance;

- *finding solutions to the problem:* the characters overcome the ideological and social obstacles to their love;
- *solution:* wedding / love harmony, or death, separation characters.

Representative examples of films: *Love in Konigsberg* (2006), *Love in St. Petersburg* (2009), etc.

Structure and genre stereotypes of comedy films

-*historical period, locale:* any length of time until 2014, Russia / USSR, DBR / DDR / Germany and other countries;
- *furnishings, household items:* a modest dwelling and household items Soviet / Russian characters, comfortable home and household items Western characters of Russian millioners, mafia;
- *methods of depicting reality:* as a rule, conditional grotesque in relation to the lives of people from "enemy states";
- *characters, their values, ideas, clothes, physique, vocabulary, facial expressions, gestures:* Soviet / Russian and Western characters with contrasting ideological and social status. They look as set sources of media texts: Soviet characters (unless of course they have not conceived flop to the West) are shown with vulgar fanatics primitive vocabulary forever scowling faces, active gestures and unpleasant tone of voice; Russian characters may look more differentiated;
- *significant change in the lives of the characters:* the characters encountered in the funny / eccentric circumstances in this case, either the German or Soviet / Russian characters are on foreign soil;
- *problems encountered*: "culture shock", mutual misunderstanding;
- *finding solutions to the problem:* in a series of funny / eccentric characters situations overcome ideological barriers to understanding;
- *solution:* understanding characters, colored humor.

Representative examples of films: *The Gorilla Bathes at Noon* (1993), *Gate to Heaven* (2003), etc.

My analysis of feature films related to the Soviet / Russian theme and Soviet / Russian characters, set in Germany / West Germany from 1953 to 2014 allowed us to construct a table 1.

Table 1: German Feature Films on the Russian Subject (1946-2014)
Compiled by Alexander Fedorov

Soviet Period								
Year of film release:	**Total number of German feature films associated with the Russian subject:**	***Films' Genres***						
		Drama	**Comedy**	**Triller|& Detective**	**Melodrama**	**Action**	**Sci-Fi**	
1953	1	0	0	0	1	0	0	
1954	0	0	0	0	0	0	0	
1955	0	0	0	0	0	0	0	
1956	1	0	0	0	1	0	0	
1957	0	0	0	0	0	0	0	
1958	3	2	0	0	1	0	0	
1959	2	1	1	0	0	0	0	
1960	2	0	1	0	1	0	0	
1961	0	0	0	0	0	0	0	
1962	4	2	2	0	0	0	0	
1963	1	1	0	0	0	0	0	
1964	5	2	1	0	2	0	0	
1965	3	0	1	2	0	0	0	

1966	3	1	2	0	0	0	0	
1967	9	5	4	0	0	0	0	
1968	1	0	0	0	1	0	0	
1969	2	1	1	0	0	0	0	
1970	4	4	0	0	0	0	0	
1971	1	0	1	0	0	0	0	
1972	1	1	0	0	0	0	0	
1973	0	0	0	0	0	0	0	
1974	2	2	0	0	0	0	0	
1975	1	1	0	0	0	0	0	
1976	1	0	0	0	1	0	0	
1977	2	2	0	0	0	0	0	
1978	0	0	0	0	0	0	0	
1979	1	0	0	1	0	0	0	
1980	0	0	0	0	0	0	0	
1981	1	1	0	0	0	0	0	
1982	2	2	0	0	0	0	0	
1983	0	0	0	0	0	0	0	
1984	4	3	1	0	0	0	0	
1985	0	0	0	0	0	0	0	
1986	1	1	0	0	0	0	0	
1987	2	2	0	0	0	0	0	
1988	3	3	0	0	0	0	0	
1989	0	0	0	0	0	0	0	
1990	2	2	0	0	0	0	0	
1991	1	0	1	0	0	0	0	
Total (Soviet period)	**66**	**39**	**16**	**3**	**8**	**0**	**0**	
Russian period								
Year of film release:	**Total number of German feature films associated with the Russian subject:**	***Films' Genres***						
		Drama	**Comedy**	**Triller|& Detective**	**Melodra ma**	**Action**	**Sci-Fi**	
1992	0	0	0	0	0	0	0	
1993	5	4	1	0	0	0	0	
1994	1	1	0	0	0	0	0	
1995	1	0	1	0	0	0	0	
1996	3	1	0	2	0	0	0	
1997	2	1	0	0	0	1	0	
1998	2	1	0	1	0	0	0	
1999	3	1	1	1	0	0	0	
2000	2	2	0	0	0	0	0	
2001	7	4	0	2	1	0	0	
2002	5	2	0	1	0	1	1	
2003	5	3	2	0	0	0	0	
2004	4	3	0	0	0	1	0	
2005	5	4	0	0	0	1	0	
2006	9	5	1	2	1	0	0	
2007	7	4	1	0	1	1	0	
2008	4	2	0	2	0	0	0	

2009	6	1	0	2	1	1	1	
2010	7	4	0	0	0	3	0	
2011	2	2	0	0	0	0	0	
2012	1	1	0	0	0	0	0	
2013	1	1	0	0	0	0	0	
2014	0	0	0	0	0	0	0	
Total (Russian period)	**82**	**47**	**7**	**13**	**4**	**9**	**2**	
TOTAL:	**148**	**86**	**23**	**16**	**12**	**9**	**2**	

Results.

As a result of analysis, I found that from 1953 to 2014 in the Federal Republic of Germany was photographed 148 feature films related to Russia and Russian characters. The first postwar German feature film with Russian characters was filmed in 1953.

60 feature films from 148 were co-production (with France, Italy, USA, Austria, Switzerland, and other countries), and 46 - the films adaptations of the Russian literary classics (prose and plays of Anton Chekhov, Fedor Dostoyevsky, Leon Tolstoy, Nikolai Gogol , Maxim Gorky, etc.).

As for the genre spectrum of these films, it is obvious dominant genre drama (86 films). Followed by (in descending order): comedy (23 films), detectives and thrillers (16 films), melodrama (12 films), action movies (9) and fiction films (2).

Only 88 from 148 of German films, associated with Soviet or Russian characters, talk about time period of 1940s – 1990s and the beginning of the XXI century. The following topics dominated in these 88 films:

- escape/emigration od russian carecters to the West (11 films),
- espionage and terrorism (10 films),
- the Russian mafia, banditry, prostitution (10 films),
- the German characters suffering during the Second World War on the Eastern Front in the first half of the 1940s (7 films),
- the suffering of the German characters during the Soviet occupation of Germany in the second half of the 1940s (5 films),
- adventure of German characters caught in the Soviet Union or Russia during the 1960s to the present days.

Analyzing the figures, I can note a significant increase (at least 2.5 - fold) to the attention of German filmmakers of the Soviet / Russian theme in the post-Soviet era. So 66 films with Soviet and Russian characters was delivered in Germnay for 45 five years after the war (1946 to 1991), and 82 films - in the last 22 years (1992-2014).

When saving dominant drama (39 dramas in the Soviet period and 47 - in the post-soviet) is clearly observed decline in the share of comedy films (16 comedies in the Soviet period to 7 - in the post-soviet) and an increase in the number of detectives, thrillers and action (in the Soviet period, these genres can be traced in the aggregate as the main in the 3 films only, whereas in the post-Soviet period - already in the 22 films).

148 feature films with the Soviet / Russian characters ... it much or little? Looking to compare. For example, in the U.S. during the Soviet period was delivered 242 films of this kind, and since 1992 – about 150. But – 148 films, it's about the same as it was filmed from 1946 to 2014 in France and Italy together...

Consequently, interest in Russian cinema topics in Germany accidental, and understandably so – the history of Russia and Germany are closely linked, including two world wars, where both sides were killed tens of millions of people.

As for the reasons for the increasing number of Russian films with themes - especially with modern – that over the past 20 years, then I would venture to hypothesize that it affected a significant inflow into Germany and Soviet Russian emigrants in it since 1992. Consequently, inside Germany itself today has considerable largest audience interested in films about Russia and Russian characters: from 82 million people residing in Germany, about 6 million in one degree or another fluent in Russian [Russian language ..., 2014].

Contemporary German fiction cinema, associated with Soviet / Russian theme and Soviet / Russian characters, of course, gives a more stereoscopic and realistic image of Russia and Russian (see, for example, *Love in Königsberg, England, Enemy at the Gates, Gate to Heaven,* etc.). However, many German films 1992-2014's still pretty primitive approach inherent to the interpretation of events and characters associated with Russia (*Russian Roulette - Moscow-95, Transsiberian,* etc.).

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Selected Filmography on the article topic

Weg ohne Umkehr / No Way Back. West Germany, 1953. Director Victor Vicas, Beate von Molo. Screenwriter Gerhard T. Buchholz (book by Grogory Klimov). Actors: Ivan Desny, Ruth Niehaus, L.Kedrova, S.Belousov, L.Pilyaev and others. Melodrama.

Der Revisor. West Germany, 1955. Director and Screenwriter Ulrich Lauterbach (play by N.Gogol). Actors: Fred Kallmann, Walter Ladengast, Harald Mannl and others. Comedy.

Die Heiratskomodie. West Germany, 1955. Director Bruno Hubner (play by N.Gogol). Actors: Fritz Asmussen, Lina Carstens, Hans Clarin and others. Comedy.

Anastasia - Die letzte Zarentochter. West Germany, 1956. Director Falk Harnack. Screenwriters: Herbert Reinecker, Alf Teichs. Actors: Lilli Palmer, Ivan Desny, Ellen Schwiers and others. Melodrama.

Auferstehung. West Germany-Italy-France, 1958. Director Rolf Hansen. Screenwriters: Renato Castellani, Juliane Kay (novel by L.Tolstoy). Actors: Horst Buchholz, Myriam Bru, Edith Mill and others. Melodrama.

Der Arzt von Stalingrad. West Germany, 1958. Director Geza von Radvanyi. Screenwriter Werner P. Zibaso (novel by Heinz G. Konsalik). Actors: O.E. Hasse, Eva Bartok, Mario Adorf, Vera Chekhova and others. Drama.

Petersburger Nachte. West Germany, 1958. Director Paul Martin. Screenwriters: Johannes Hendrich, Max Nosseck. Actors: Ewald Balser, Johanna von Koczian, Ivan Desny and others. Drama.

Der Kirschgarten. West Germany, 1959. Director and Screenwriter Heinz Hilpert (play by A.Chekhov). Actors: Inge Birkmann, Kathrin Ackermann, Jenny Lattermann and others. Comedy.

Raskolnikoff. West Germany, 1959. Director Franz Peter Wirth. Screenwriter Leopold Ahlsen (novel by F.Dostoyevsky). Actors: Hartmut Reck, Paul Verhoeven, Solveig Thomas and others. Drama.

Ein Monat auf dem Lande. West Germany, 1960. Director Robert Freitag (play by I.Turgenev). Actors Maria Becker, Jorn Behrmann, Max Buchsbaum and others. Melodrama.

Wir Kellerkinder. West Germany, 1960. Director Hans-Joachim Wiedermann. Screenwriters: Thomas Keck, Herbert Kundler. Actors: Wolfgang Neuss, Karin Baal, Ingrid van Bergen and others. Comedy.

The Devil's Agent. West Germany-UK, 1962. Director John Paddy Carstairs. Screenwriter John Paddy Carstairs (novel by Hans Habe). Actors: Peter van Eyck, Marianne Koch, Macdonald Carey, Christopher Lee and others. Drama.

Escape from East Berlin. USA-West Germany, 1962. Director Robert Siodmak. Screenwriters: Gabrielle Upton, Peter Berneis. Actors: Don Murray, Christine Kaufmann, Werner Klemperer and others. Drama.

Genosse Münchhausen. West Germany, 1962. Director Wolfgang Neuss. Actors: Wolfgang Neuss, Corny Collins, Ingrid van Bergen and others. Comedy.

Die Rache. West Germany, 1962. Director Rainer Erler (story by A.Chekhov). Actors: Rudolf Vogel, Eva Maria Meineke, Harald Leipnitz and others. Comedy.

Stalingrad. West Germany, 1963. Director Gustav Burmester. Screenwriter Claus Hubalek (novel by Theodor Plievier). Actors: Ullrich Haupt, Hanns Lothar, Carl Lange and others. Drama.

Das Duell. West Germany, 1964. Director Hans Schweikart. Screenwriter Leo Lehmann (story by A.Chekhov). Actors: Hartmut Reck, Gerlinde Locker, Pinkas Braun and others. Drama.

Gerechtigkeit in Worowogorsk. West Germany, 1964. Director Dietrich Haugk. Screenwriter Theodor Schubel (stories by A.Chekhov). Actors: Paul Bos, Herbert Botticher, Johannes Buzalski and others. Comedy.

Helle Nachte. West Germany, 1964. Director and Screenwriter Wilhelm Semmelroth (story by F.Dostoyevsky). Actors: Kornelia Boje, Hartmut Reck, Ida Ehre and others. Melodrama.

Der Seitensprung. West Germany, 1964. Director Rainer Erler. Screenwriter Theodor Schubel (story by A.Chekhov). Actors: Robert Meyn, Nora Minor, Hannelore Elsner and others. Melodrama.

Le train de Berlin est arrete' / Stop Train 349 / Verspatung in Marienborn. France-Italy-West Germany, 1964. Director Rolf Hadrich. Screenwriters: Will Tremper, Jim Henaghan. Actors: Jose Ferrer, Sean Flynn, Nicole Courcel and others. Drama.

The Dirty Game / Guerre secrete. USA-France-Italy-West Germany, 1965. Directors: Christian-Jaque, Werner Klingler, Carlo Lizzani, Terence Young. Screenwriters: Philippe Bouvard, Jacques Caborie and others. Actors: Henry Fonda, Robert Ryan, Vittorio Gassman, Annie Girardot, Bourvil, Robert Hossein, Klaus Kinski and others. Thriller.

Onkelchens Traum. West Germany, 1965. Director Gunter Grawert. Screenwriter Lester Cole (story by F.Dostoyevsky). Actors: Rudolf Vogel, Rosel Schafer, Monika Berg and others. Comedy.

Der Spion, der i die holle ging. West Germany-France, 1965. Director Maurice Labro. Screenwriter Claude Rank. Actors: Ray Danton, Pascal Petit, Roger Hanin and others. Detective Story.

Der Kirschgarten. West Germany, 1966. Director Peter Zadek (play by A.Chekhov). Actors: Margot Trooger, Hans Jaray, Marlen Diekhoff and others. Comedy.

Defector. France - West Germany, 1966. Director Raoul Levy. Screenwriters: Peter Francke, Robert Guenette. Actors: Montgomery Clift, Hardy Kruger, Macha Meril and others. Drama.

Zwei Girls vom roten Stern / An Affair of State. West Germany-Austria-France, 1966. Director Sammy Drechsel. Screenwriter Klaus Peter Schreiner (novel by Peter Norden). Actors: Lilli Palmer, Curd Jürgens, Pascale Petit and others. Comedy.

Der Alte. West Germany-Belgium-Canada-Switzerland, 1967. Director and Screenwriter Lutz Buscher (story by M.Gorky). Actors : Paul Verhoeven, Ursula Jockeit, Hans Helmut Dickow and others. Drama.

Drei Jahre. West Germany, 1967. Director Eberhard Itzenplitz. Screenwriter Leo Lehmann (play by A.Chekhov). Actors: Franz Kollasch, Christiane Bruhn, Herbert Fleischmann and others. Drama.

Ich will Mjussow sprechen. West Germany, 1967. Director Rolf von Sydow. Screenwriters: Jan Mertens, Gerd Bauer (play by V.Kataev). Actors: Joachim Teege, Kurt Sobotka, Karin Jacobsen and others. Comedy.

Liebesnachte in der Taiga. West Germany, 1967. Director Harald Philipp. Screenwriter Werner P. Zibaso (novel by Heinz G. Konsalik). Actors: Thomas Hunter, Marie Versini, Stanislav Ledinek, Ivan Desny and others. Drama.

Die Letzten. West Germany, 1967. Director Oswald Dopke. Screenwriters: Gerd Rosler, F.K.Wittich (play by M.Gorky). Actors Wolfgang Engels, Carl Lange, Alice Treff and others. Drama.

Pension Clausewitz. West Germany, 1967. Director Ralph Habib. Screenwriters: Franz Baake, Nero Brandenburg. Actors: Wolfgang Kieling, Maria Brockerhoff, Friedrich Schoenfelder and others. Comedy.

Der Revisor. West Germany, 1967. Director Gustav Rudolf Sellner (play by N.Gogol). Actors: Alfred Schieske, Ruth Hausmeister, Claudia Brodzinska and others. Comedy.

Das schwedische Zundholz. West Germany, 1967. Director and screenwriter Gerhard Klingenberg (story by A.Chekhov). Actors: Hans Joachim Klein, Ellen Schwiers, Rudolf Vogel and others. Comedy.

Der Tod des Iwan Iljitsch. West Germany, 1967. Director Hansgunther Heyme. Screenwriter Artur Adamov (story by L.Tolstoy). Actors: Ulrich Matschoss, Josefine Schult-Prasser, Johanna Liebeneiner and others. Drama.

Tragodie auf der Jagd. West Germany, 1968. Director Gerhard Klingenberg. Screenwriter Leo Lehmann (play by A.Chekhov). Actors: Erich Schellow, Karin Baal, Andrea Jonasson and others. Melodrama.

Der ewige Gatte. West Germany, 1969. Director and screenwriter Stanislav Barabas (story by F.Dostoyevsky). Actors: Jozef Kroner, Gunter Mack, Brigitte Skay and others. Comedy.

Solens barn. West Germany, 1969. Director Ernst Gunther (play by M.Gorky). Actors Gunnel Brostrom, Ulf Brunnberg, Gertrud Fridh and others. Drama.

Erste Liebe. West Germany, 1970. Director and screenwriter Maximilian Schell (story by I.Turgenev). Actors John Moulder-Brown, Dominique Sanda, Maximilian Schell and others. Melodrama.

Menschen. West Germany, 1970. Director Fritz Umgelter. Screenwriter Leopold Ahlsen (play by M.Gorky). Actors: Ullrich Haupt, Gunter Mack, Gunter Strack and others. Drama.

Die U-2-Affäre. West Germany, 1970. Director Rudolf Nussgruber. Screenwriters: Hans Dieter Schreeb, Hans-Georg Thiemt. Actors: Michael Degen, Claudia Wedekind, Dieter Eppler and others. Drama.

Die Mutter. West Germany, 1971. Directors: Wolfgang M. Schwiedrzik, Frank Patrick Steckel. Screenwriter Bertolt Brecht (story by M.Gorky). Actors: Sabine Andreas, Monica Bleibtreu, Edith Clever and others. Drama.

W.R. - Misterije organizma. W.R. - Die Mysterien des Organismus. Ugoslavia - West Germany, 1971. Director and screenwriter Dusan Makavejev. Actors: Milena Dravic, Ivica Vidovic, Jagoda Kaloper and others. Comedy.

Escape to the Sun. Israel - France - West Germany, 1972. Director and screenwriter Menahem Golan. Actors: Laurence Harvey, Josephine Chaplin, Lila Kedrova, John Ireland and others. Drama.

Krankensaal 6. West Germany, 1974. Director and screenwriter Karl Fruchtmann (story by A.Chekhov). Actors: Helmut Qualtinger, Stefan Wigger, Zalman Lebiush and others. Drama.

Die Mowe. West Germany, 1974. Director Peter Zadek (play by A.Chekhov). Actors: Lola Muthel, Hermann Lause, Hans Mahnke and others. Drama.

Michel Strogoff. France-Austria-Switzerland-West Germany, 1975. Director Screenwriter Robert Brandau. Actors: Raimund Harmstorf, Lorenza Guerrieri, Pierre Vernier, Vernon Dobtcheff and others. Drama.

Oblomows Liebe. West Germany, 1976. Director Claus Peter Witt. Screenwriter Manfred Bieler (novel by I.Goncharov). Actors: Wolfgang Reichmann, Herbert Botticher, Johanna Elbauer and others. Melodrama.

Cross of Iron. UK - West Germany, 1977. Director Sam Peckinpah. Screenwriters: Julius J. Epstein, James Hamilton, Walter Kelley (novel by Willi Heinrich). Actors: James Coburn, Maximilian Schell, James Mason and others. Drama.

Die Damonen. Austria - West Germany, 1977. Director Claus Peter Witt. Screenwriter Leopold Ahlsen (novel by F.Dostoyevsky). Actors: Maria Wimmer, Christoph Bantzer, Hannes Messemer and others. Drama.

Charlie Muffin. UK- West Germany, 1979. Director Jack Gold. Screenwriter Keith Waterhouse (novel by Brian Freemantle). Actors: David Hemmings, Sam Wanamaker, Jennie Linden and others. Thriller.

Der lebende Leichnam. West Germany, 1981. Director Otto Schenk (play by L.Tolstoy). Actors: Lukas Ammann, Hartmut Becker, Helmut Lohner and others. Drama.

Der Mann auf der Mauer. West Germany, 1982. Director Reinhard Hauff. Screenwriter Peter Schneider . Actors: Marius Müller-Westernhagen, Julie Carmen, Towje Kleiner and others. Drama.

Nachtasyl. West Germany, 1982. Director Jurgen Gosch. (play by M.Gorky). Actors: Helmut Brasch, Anna Henkel, Brigitte Janner and others. Drama.

Der Bar. West Germany, 1984. Director and screenwriter Don Askarian (play by A.Chekhov). Actors: Hans Peter Hallwachs, Elisabeth Rath, Hans Machin and others. Comedy.

La Diagonale du fou. France-Switzerland-West Germany, 1984. Director and screenwriter Richard Dembo. Actors: Michel Piccoli, Akiva Liebskind, Leslie Caron, Liv Ullmann and others. Drama.

Drei Schwestern. West Germany, 1984. Director and screenwriter Thomas Langhoff (play by A.Chekhov). Actors: Hilmar Baumann, Jorg Gudzuhn, Walter Jupe' and others. Drama.

Rasputin - Orgien am Zarenhof. West Germany, 1984. Director Ernst Hofbauer. Screenwriters: Ernst Hofbauer, C.M. Sherland. Actors: Alexander Conte, Uschi Karnat, Marion Berger and others. Drama.

Drei Schwestern. West Germany, 1986. Director and screenwriter Peter Stein (play by A.Chekhov). Actors: Edith Clever, Corinna Kirchhoff, Jutta Lampe and others. Drama.

Maschenka. West Germany-UK-France-Finland, 1987. Director John Goldschmidt. Screenwriter John Mortimer (novel by V.Nabokov). Actors: Irina Brook, Cary Elwes, Sunnyi Melles and others. Drama.

Das Treibhaus. West Germany, 1987. Director and screenwriter Peter Goedel (novel by Wolfgang Koppen). Actors: Christian Doermer, Otto A. Buck, Hans Faber and others. Drama.

Judgment in Berlin. West Germany-USA, 1988. Director Leo Penn. Screenwriters: Leo Penn, Joshua Sinclair. Actors: Martin Sheen, Heinz Hoenig, Jutta Speidel, Sean Penn and others. Drama.

Testimony. Denmark-Holland-Sweden-West Germany-UK, 1988. Director Tony Palmer. Screenwriters: Tony Palmer, David Rudkin. Actors: Ben Kingsley, Sherry Baines, Magdalen Asquith and others. Drama.
The story of the great Soviet composer Dmitri Shostakovich (1906-1975) and his life and career during the rule of Stalin.

Ariadna. West Germany, 1990. Director and screenwriter Jochen Richter (story by A.Chekhov). Actors: Albert Fortell, Wolf Harnisch, Rolf Illig and others. Drama.

Moskau – Petuschki. Germany, 1991. Director Jens Carl Ehlers. Screenwriter Jens Carl Ehlers (novel by Venedict Erofeev). Actors: Jan Biczycki, Henryk Bista, Doris Buchrucker and others. Comedy.

Gorilla Bathes at Noon. Germany-Yugoslavia, 1993. Director and screenwriter Dusan Makavejev. Actors: Svetozar Cvetkovic, Anita Mancic, Alexandra Rohmig and others. Comedy.

The Innocent. Germany-UK, 1993. Director John Schlesinger. Screenwriter Ian McEwan. Actors: Anthony Hopkins, Isabella Rossellini, Campbell Scott and др. Drama.

Sommergaste. Germany, 1993. Director David Mouchtar-Samorai (play by M.Gorky). Actors: Tonio Arango, Wolfgang Arps, Gabriela Badura and others. Drama.

Stalingrad. Germany, 1993. Director Joseph Vilsmaier. Screenwriters: Jurgen Buscher, Christoph Fromm, Johannes Heide, Joseph Vilsmaier. Actors: Dominique Horwitz, Thomas Kretschmann, Jochen Nickel and others. Drama.

Wehner - Die unerzählte Geschichte. Germany, 1993. Director and screenwriter Heinrich Breloer. Actors: Ulrich Tukur, Heinz Baumann, Helmut Ahner, Gennady Vengerov and others. Drama.

Hasenjagd - Vor lauter Feigheit gibt es kein Erbarmen. Austria-Germany, 1994. Director and screenwriter Andreas Gruber. Actors: Elfriede Irrall, Rainer Egger, Oliver Broumis and others. Drama.

Russian Roulette - Moscow 95. Germany, 1995. Director Menahem Golan. Screenwriter Andrei Samsonov. Actors: Barbara Carrera, Zachi Noy, Oliver Reed, Maria Shukshina and others. Comedy.

Der letzte Kurier. Germany, 1996. Director Adolf Winkelmann. Screenwriter Matthias Seelig. Actors: Sissi Perlinger, Sergey Garmash, Hans Martin Stier, Gennady Vengerov and others. Thriller.

So nicht, Frau Staatsanwalt. Mona M. - Mit den Waffen einer Frau. **Germany, 1996.** Directors: Gunter Friedrich, Franz Josef Gottlieb. Actors: Simone Thomalla, Regimantas Adomaitis, Hans-Uwe Bauer, Gennady Vengerov and others. Drama.

The Writing on the Wall. UK-Germany, 1996. Director Peter Smith. Screenwriter Patrick Malahide. Actors: Lena Stolze, Martin Glyn Murray, Bill Paterson, Gennady Vengerov and others. Thriller.

Air Force One. USA-Germany, 1997. Director Wolfgang Petersen. Screenwriter Andrew W. Marlowe. Actors: Harrison Ford, Gary Oldman, Glenn Close, Andrey Divoff, Ilya Baskin, Oleg Taktarov and others. Action.

Hostile Waters. France-Germany-USA, 1997. Director David Drury. Screenwriter Troy Kennedy-Martin. Actors: Rutger Hauer, Martin Sheen, Max von Sydow and others. Drama.

Die kaukasische Nacht. Germany, 1998. Director Gordian Maugg. Actors: Robert Schielecke, David Iaschwilli, Winfried Glatzeder and others. Drama.

23. Germany, 1998. Director Hans-Christian Schmid. Screenwriters: Michael Dierking, Michael Gutmann. Actors: August Diehl, Fabian Busch, Dieter Landuris and others. Thriller.

History Is Made at Night. UK-France-Germany-Finland, 1999. Director Ilkka Jorvi-Laturi. Screenwriters: Patrick Amos, Jean-Pierre Gorin. Actors: Bill Pullman, Irene Jacob, Udo Kier and others. Comedy.

Kinder der Sonne. Germany, 1999. Director Achim Benning (play by M.Gorky). Actors: Erika Pluhar, Michael Heltau, Kitty Speiser and others. Drama.

Stan Becker - Echte Freunde. Germany, 1999. Director Kaspar Heidelbach. Screenwriter Martin Kluger. Actors: Heinz Hoenig, Rolf Zacher, Martin Armknecht, Gennady Vengerov and others. Thriller.

Damonen. Germany, 2000. Director Frank Castorf. Screenwriters: Albert Camus, Frank Castorf (novel by F.Dostoyevsky). Actors: Kathrin Angerer, Henry Hubchen, Hendrik Arnst and others. Drama.

England! Germany, 2000. Director Achim von Borries. Screenwriters: Karin Astrom, Achim von Borries. Actors: Ivan Shvedov, Merab Ninidze, Chulpan Khamatova and others. Drama.

Along Came a Spider. USA-Germany-Canada, 2001. Director Lee Tamahori. Screenwriter Marc Moss (novel by James Patterson). Actors: Morgan Freeman, Monica Potter, Michael Wincott, Ravil Isyanov and others. Thriller.

Enemy at the Gates. USA-Germnay-UK, 2001. Director Jean-Jacques Annaud. Screenwriters: Jean-Jacques Annaud, Alain Godard. Actors: Jude Law, Ed Harris, Rachel Weisz, Joseph Fiennes, Bob Hoskins, Ivan Shvedov, Gennady Vengerov and others. Drama.

Ice Planet. Germany, 2001. Director Reiner Schone. Actors: Sab Shimono, James O'Shea, Valery Nikolaev and others. Sci-Fi.

Mayday! Uberfall auf hoher See. Germany, 2001. Director Werner Masten. Actors: Klaus Lowitsch, Igor Jeftic, Bernd Stegemann, Gennady Verngerov and others. Thriller.

The Quickie. France-UK-Germany, 2001. Director and screenwriter Sergey Bodrov. Actors: Brenda Bakke, Sergey Bodrov, Eugeny Lazarev, Vladimir Mashkov and others. Drama.

Resurrezione. Italy-France-Germany, 2001. Directors: Paolo & Vittorio Taviani. Screenwriter Paolo Taviani (novel by L.Tolstoy). Actors: Stefania Rocca, Timothy Peach, Cecile Bois and others. Melodrama.

Taking Sides. France-UK-Germany-Austria, 2001. Director: István Szabó. Writer Ronald Harwood. Actors: Harvey Keitel, Stellan Skarsgård, Moritz Bleibtreu, Oleg Tabakov and others. Drama.

Der Tunnel. Germany, 2001. Director Roland Suso Richter. Screenwriter Johannes W. Betz Actors: Heino Ferch, Nicolette Krebitz, Sebastian Koch and others. Drama.

Doctor Zhivago. UK-Germany-USA, 2002. Director Giacomo Campiotti. Screenwriter Andrew Davies (novel by Boris Pasternak). Actors: Keira Knightley, Sam Neill, Bill Paterson and others. Drama.

K-19: The Widowmaker. UK-USA-Germany-Canada, 2002. Director Kathryn Bigelow. Screenwriters: Louis Nowra, Christopher Kyle. Actors: Harrison Ford, Liam Neeson, Ravil Isyanov, Lev Prygunov and others. Drama.

Rollerball. USA-Germany, 2002. Director John McTiernan. Screenwriter William Harrison. Actors: Chris Klein, Jean Reno, Oleg Taktarov and others. Sci-Fi.

The Vector File. New Zealand-Germany, 2002. Director Eliot Christopher. Screenwriter Ian McFadyen. Actors: Casper Van Dien, Catherine Oxenberg, India Oxenberg and others. Thriller.

Gate to Heaven. Germany, 2003. Director Veit Helmer. Screenwriters: Veit Helmer, Gordan Mihic. Actors: Valery Nikolaev, Masumi Makhija, Udo Kier and others. Comedy.

Der gestohlene Mond. Germany, 2003. Director and screenwriter Thomas Stiller. Actors: Birol Unel, Lisa Martinek, Dietmar Bar, Ivan Shvedov and others. Comedy.

Lichter. Germany, 2003. Director Hans-Christian Schmid. Screenwriters: Michael Gutmann, Hans-Christian Schmid. Actors: Andrzej Gorak, Ivan Shvedov and др. Drama.

Quicksand. France-UK-Germany, 2003. Director John Mackenzie. Screewriters: Desmond Lowden, Timothy Prager. Actors: Michael Keaton, Michael Caine, Judith Godrèche and others. Drama.

Zuckerbrot. Germany, 2003. Director and screenwriter Hartmut Schoen. Actors: Florian Lukas, Marie Zielcke, Ivan Shvedov and others. Drama.

Das Bernsteinamulett. Germany, 2004. Director Gabi Kubach. Screenwriter Sue Schwerin von Krosigk (novel by Peter Prange). Actors: Muriel Baumeister, Michael von Au, Merab Ninidze and others. Drama.

Blindganger. Germany, 2004. Director Bernd Sahling. Screenwriters: Helmut Dziuba, Bernd Sahling and others. Actors: Ricarda Ramunke, Dominique Horwitz, Maria Rother, Gennady Vengerov and others. Drama.

The Bourne Supremacy. USA-Germany, 2004. Director Paul Greengrass. Screenwriter Tony Gilroy (novel by Robert Ludlum). Actors: Matt Damon, Franka Potente, Oksana Akinshina and others. Action.

Onkel Wanja. Germany, 2004. Director and screenwriter Barbara Frey (play by A.Chekhov). Actors: Rainer Bock, Helga Grimme, Thomas Holtzmann and others. Drama.

The Mechanik. Germany-USA, 2005. Director Dolph Lundgren. Screenwriters: Bryan Edward Hill, Dolph Lundgren. Actors: Dolph Lundgren, Ben Cross, Olivia Lee and others. Action.

Nachtasyl. Germany, 2005. Director and screenwriter Hardi Strum (play by M.Gorky). Actors: Hans Peter Hallwachs, Esther Schweins, Wolfgang M. Bauer and others. Drama.

Die Spielerin. Germany, 2005. Director Erhard Riedlsperger. Screenwriter Fred Breinersdorfer (story by F.Dostoyevsky). Actors: Hannelore Elsner, Erwin Steinhauer, Nina Petri and others. Drama.

The White Countess. UK-USA-Germany-China, 2005. Director James Ivory. Screenwriter Kazuo Ishiguro. Actors: Ralph Fiennes, Natasha Richardson. Drama.

Willenbrock. Germany, 2005. Director Andreas Dresen. Screenwriters: Christoph Hein, Laila Stieler. Actors: Axel Prahl, Inka Friedrich, Anne Ratte-Polle and others. Drama.

Fay Grim. USA-Germany, 2006. Director and screenwriter Hal Hartley. Actors: Parker Posey, D.J.Mendel, Liam Aiken and others. Thriller.

Goldene Zeiten. Germany, 2006. Director Peter Thorwarth. Screenwriters: Alexander M. Rumelin, Peter Thorwarth. Actors: Wotan Wilke Mohring, Dirk Benedict, Wolf Roth, Gennady Vengerov and others. Comedy.

Joy Division. UK-Germany, 2006. Director Reg Traviss. Screenwriters: Reg Traviss, Rosemary Mason. Actors: Ed Stoppard, Tom Schilling, Bernard Hill and others. Drama.

Eine Liebe in Konigsberg. Germany, 2006. Director Peter Kahane. Screenwriters: Wolfgang Brenner, Peter Kahane. Actors: Wolfgang Stumph, Chulpan Khamatova, Ivan Shvedov and others. Melodrama.

Running Scared. Germany-USA, 2006. Director and screenwriter Wayne Kramer. Actors: Paul Walker, Cameron Bright, Vera Farmiga and others. Drama.

Eine Stadt wird erpresst. Germany, 2006. Director Dominik Graf. Screenwriters: Rolf Basedow, Dominik Graf. Actors: Uwe Kockisch, Misel Maticevic, Julia Blankenburg and others. Thriller.

Valerie. Germany, 2006. Director Birgit Moller.Screenwriters: Milena Baisch, Ilja Haller. Actors: Agata Buzek, Devid Striesow, Birol Unel and others. Drama.

Vier Tochter. Germany, 2006. Director Rainer Kaufmann. Screenwriter Gabi Blauert (novel by Inger Alfven). Actors: Dagmar Manzel, Tnia Shleif and others. Drama..

An die Grenze. Germany, 2007. Director Urs Egger. Screenwriter Stefan Kolditz. Actors: Jacob Matschenz, Bernadette Heerwagen, Max Riemelt and др. Drama.

Botched. Germany-Ireland-UK, 2007. Director Kit Ryan. Screenwriters: Derek Boyle, Eamon Friel. Actors: David Heap, Alan Smyth, Stephen Dorff and others. Crime Comedy.

The Death and Life of Bobby Z. USA- Germany, 2007. Director John Herzfeld. Screenwriters: Bob Krakower, Allen Lawrence. Actors: Paul Walker, Laurence Fishburne, Oleg Taktarov and others. Action.

Lucky You. USA-Germany-Australia, 2007. Director Curtis Hanson. Screenwriters: Eric Roth, Curtis Hanson. Actors: Eric Bana, Drew Barrymore, Robert Duvall and others. Melodrama.

Nachmittag. Germany, 2007. Director and screenwriter Angela Schanelec (play by A.Chekhov). Actors: Jirka Zett, Miriam Horwitz, Angela Schanelec and others. Drama.

Die Spieler. Germany, 2007. Director and screenwriter Sebastian Bieniek. Actors: Sebastian Bieniek, Viatcheslav Demdov, Ninel Genina Demidov. Drama.

War and Peace. Italy-France-Germany-Russia, 2007. Directors: Robert Dornhelm, Brendan Donnison. Screenwriters: Lorenzo Favella, Enrico Medioli (novel by L.Tolstoy). Actors: Alexander Beyer, Clemence Poesy, Alessio Boni, Malcolm McDowell and others. Drama.

Anonyma - Eine Frau in Berlin. Germany, 2008. Director and screenwriter Max Farberbock. Actors: Nina Hoss, Eugeny Sidikhin, Irm Hermann and others. Drama.

Die Frau aus dem Meer. Germany, 2008. Director and screenwriter Nikolaus Stein von Kamienski. Actors: Anja Kling, Walter Kreye, Ulrich Tukur and others. Thriller.

Le silence de Lorna. Belgium-France-Italy-Germany, 2008. Directors and Screenwriters: Jean-Pierre & Luc Dardenne. Actors: Arta Dobroshi, Jeremie Renier, Fabrizio Rongione, Anton Jakovlev, Grigory Manukov and others. Drama.

Transsiberian. UK-Germany-Spain-Lit, 2008. Director Brad Anderson. Screenwriters: Brad Anderson, Will Conroy. Actors: Woody Harrelson, Emily Mortimer, Ben Kingsley and others. Thriller.

Durch diese Nacht. Germany, 2009. Director and screenwriter Rolf Silber. Actors: Katharina Bohm, Oliver Stokowski, Tim Bergmann and others. Drama..

Flug in die Nacht - Das Unglück von Uberlingen. Switzerland-Germany, 2009. Director Till Endemann. Screenwriters Don Bohlinger, Till Endemann. Actors: Ken Duken, Charlotte Schwab, Sabine Timoteo and others. Drama.

Eine Liebe in St. Petersburg. Germany, 2009. Director Dennis Satin. Screenwriter Brigitte Blobel. Actors: Valerie Niehaus, Martin Feifel, Nicole Heesters and others. Melodrama.

Luftslottet som sprängdes. Sweden-Denmark-Germany, 2009. Director Daniel Alfredson, Screenwriters: Stieg Larsson, Ulf Ryberg. Actors: Michael Nyqvist, Noomi Rapace, Lena Endre and others. Thriller.

Shoot the Duke. Germany, 2009. Director Stephen Manuel. Screenwriter Thomas Jahn. Actors: Stephen Baldwin, Bettina Zimmermann, Thomas Heinze. Action.

Thick as Thieves. USA-Germany, 2009. Director Mimi Leder. Screenwriter Ted Humphrey. Actors: Морган Фримен, Антонио Бандерас, Раде Шербеджия, Ivan Petrushinov, Victor Boichev, Nickolay Hadjiminev and others. Thriller.

Star Trek. USA-Germany, 2009. Director J.J. Abrams. Screenwriters: Roberto Orci, Alex Kurtzman. Actors: Chris Pine, Zachary Quinto, Simon Pegg. Sci-Fi.

Death Race 2. South Africa – Germany, 2010. Director Roel Reine'. Screenwriters: Paul W.S. Anderson, Tony Giglio. Actors: Luke Goss, Lauren Cohan, Sean Bean. Action.

Go West - Freiheit um jeden Preis. Germany, 2010. Director Andreas Linke. Screenwriters: Matthias Pacht, Daniel Mann. Actors: Sergej Moya, Franz Dinda, Frederick Lau and others. Action.

Hinterhof. Germany, 2010. Director and screenwriter Ana Felicia Scutelnicu. Actors: Marina Weis, Jakob Kohn, Masha Tokareva. Short | Drama

The Last Station. Cermany-UK, 2010. Director Michael Hoffman. Screenwriters: Michael Hoffman, Jay Parini. Actors: Helen Mirren, James McAvoy, Christopher Plummer and others. Drama.

Poll. Germany-Austria, 2010. Director and screenwriter Chris Kraus. Actors: Paula Beer, Edgar Selge, Tambet Tuisk and others. Drama. James Greer. Actors: Jackie Chan, Amber Valletta, Billy Ray Cyrus and others. Action.

4 дня в мае / Vier tage im Mai. Germany-Russia, 2010. Director and screenwriter Achim von Borries. Actors: Aleksey Guskov, Merab Ninidze, Martin Brambach and others. Drama.

Der Uranberg. Germany, 2010. Director Dror Zahavi. Screenwriters: Hans-Werner Honert, Thomas Schulz. Actors: Vinzenz Kiefer, Nadja Bobyleva, Henry Hübchen and others. Drama.

A Dangerous Method. UK-Germany-Canada-Switzerland, 2011. Director David Cronenberg.
Screenwriter Christopher Hampton. Actors: Michael Fassbender, Keira Knightley, Viggo Mortensen. Drama.

Wunderkinder. Germany, 2011. Director Markus Rosenmuller. Screenwriters: Artur Brauner, Stephen Glantz. Actors: Gedeon Burkhard, Natalia Avelon, Catherine H. Flemming. Drama.

Het Meisje en de Dood | Devushka i smert. Holland-Russia-Germany, 2012. Director Jos Stelling. Screenwriters: Jos Stelling, Bert Rijkelijkhuizen. Actors: Sylvia Hoeks, Dieter Hallervorden, Paul Schlase, Sergey Makovetsky, Renata Litvinova, Svetlana Svetlichnaya. Drama.

Unsere Mütter, unsere Väter. Germany, 2013. Director Philipp Kadelbach. Screenwriter Stefan Kolditz. Actors: Volker Bruch, Tom Schilling, Katharina Schuttler, Miriam Stein, Ludwig Trepte . Drama.