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DETERMINATION OF THE RELATIONSHIP OF THE QUALITY OF LIFE WITH THE LIVING STANDARD OF THE POPULATION

Abstract: *The article reveals the theoretical essence and determination of the relationship of the quality of life with the standard of living of the population. Based on an analysis of a number of literature, the author determined the relationship between the categories "level" and "quality of life" of the population, and examined the theoretical and methodological foundations of the formation of quality of life. In addition, the author provides a system of indicators for assessing the level and quality of life.*

Key words: *quality of working life standard of living, indicators of the formation of the quality of life of the population, quality of life.*

Language: *English*

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Introduction

JEL: L43; L94; G18

The definition of "standard of living" has become widespread, clearly illustrating the dynamics of social development in all the variety of economic and social processes that characterize it. However, when solving various research or practical problems, specialists interpret its essential content in different ways. In this regard, it can be noted that a generally accepted understanding of the category "standard of living" has not yet been developed.

In particular, the approach to the interpretation of living standards as a set of characteristics of consumption has been disseminated in documents of international organizations and statistical reporting.

Literature review

S.A. Ayvazyan identifies the standard of living with well-being, which is an expression of the degree of satisfaction of the material needs of the population [1]. E.A. Chulichkov indicates that the standard of living is determined by the amount of consumed goods and services [2]. A.T. Sarkulova considers the standard of living as a cost characteristic of its quality [3].

Many authors under the standard of living understand the category due to the social and economic status of a person, which characterizes the individual's ability to satisfy the standard level of social, material and cultural needs and benefits defined in society.

According to the interpretation used by the United Nations, the standard of living is understood as the degree of satisfaction of the needs of the population, provided with a mass of goods and services used per unit of time. This definition focuses on the relationship of living standards with the needs of the population. In addition, it is typical for it to consider the standard of living in relation to the development indicators of the national economy as a whole and households in particular. At the same time, incomes and savings of the population act as key factors determining the standard of living.

Analysis and results

The concept of "standard of living" is determined by a system of qualitative and quantitative indicators, namely: the structure and level of

consumption of food, goods and services; per capita income; the level and dynamics of prices for basic commodities; the amount of tax and social benefits; specific gravity of the population below the poverty line, etc. Quantitative level parameters are reflected in absolute and relative values calculated on the basis of statistical data. As an economic category and social standard, the standard of living characterizes the level of satisfaction of the social and physical needs of people and reflects the availability of material resources necessary for a comfortable existence.

Thus, the concept of "standard of living" reflects, first of all, the welfare of the population, the well-being of society in general and the individual - in particular.

At the same time, according to the researchers, the following gradations of the standard of living of the population can be distinguished [4]:

- prosperity, implying the free use of the whole range of benefits that provide the opportunity for the comprehensive development of the individual;
- a normal level, assuming the presence of rational consumption in accordance with scientifically based standards, which provides the ability to restore the physical and intellectual forces of the individual;
- poverty, in which the level of consumption of goods ensures the preservation of efficiency as the minimum threshold for the reproduction of labor;
- poverty, in which the individual consumes only the minimum set of benefits, which is acceptable according to biological criteria, that allows him to maintain the viability of the individual.[5]

The most important parameter that allows us to assess the standard of living is social standards as scientifically based guidelines that reflect the direction of development of social processes. At the same time, the development of the material base of social spheres, incomes and expenses of the population, consumption of material goods and paid services, living conditions, social security and services, etc.

The category “standard of living” in the classical interpretation is interpreted from the point of view of the income level of the population, poverty and social inequality - i.e. categories characterizing the satisfaction of material needs.[7]

It should be noted that integrated approaches to assessing the quality of life are getting more and more development, within the framework of which the objective parameters of the quality of life and their subjective perception are linked. For example, employees of The Economist Intelligence Unit propose using the index of the quality of life of the population, which is developed on the basis of a combination of the results of opinion polls characterizing satisfaction with living conditions and objective factors of economic development, including the following parameters: health; quality of family life; participation in socio-political processes; well-being in the material sphere; political stability; security level; favorable climatic conditions; employment and its forms; political and civil liberties; gender equality.

If the standard of living characterizes the realization of the needs of members of society for benefits, then the quality of life is the degree of satisfaction of needs with the achievement of that particular personality and psychological state, without an adequate assessment of which it is impossible to judge the real state of satisfaction of people's needs. In this case, you need to see the differences between the concepts of “quality of life” from the concepts of “quality of labor”, “quality of labor”, “quality of working life”. As V.A. notes Poisons, the quality of the workforce - this is the degree of professional and qualification of the employee to perform certain labor functions, taking into account their complexity and the employee’s responsibility for the quality and established production time of the product. The quality of the workforce is determined by its natural properties (gender, age, physical strength, etc.) and sociocultural norms. The former determine the division of labor, the latter determine its value, and demand on the labor market [6, p. 102-103]. Labor quality - a set of properties of the process of labor activity, due to the ability and desire of the employee to perform a specific task in accordance with the requirements.

Labor quality indicators - qualitative and quantitative characteristics of the work process and its results. The quality of labor depends on the complexity and working conditions, qualifications and attitude of the employee to work [8, p. 103].

The quality of working life is a set of conditions that determine the degree of effective realization of the labor potential of a society, enterprise, individual person. The quality of working life is a component of a more general category of quality of life and opportunities for the development of the personality of citizens. There are three approaches to assessing the quality of working life. The first assesses the result of reforms and social policies and is primarily aimed at ensuring a decent standard of living. The second aims to impartially determine the economic, social, political and cultural status of society. The third involves assessing the quality of working life primarily in the workplace. The objective of this methodological approach is to create conditions that impede the process of alienation of labor. The basis of the concept of the quality of working life is the position: the main motivator should not be salary, not a career, but satisfaction from achievements in the labor process.

The concept of quality of life is formulated by a set of conditions that determine the physical, psychological and social well-being of a person and social groups. Such conditions include not only objective circumstances (food, housing, employment,

education), but also a subjective assessment of well-being - satisfaction with one's life, including work life.

Speaking about the relationship of the quality of life with the standard of living, it should be borne in mind that the latter is expressed by a system of quantitative and qualitative indicators that reflect its various aspects - the total amount of material goods and services consumed per capita; the level of consumption of food and non-food products, as well as services; real incomes of the population; the amount of wages; the duration of working and free time; housing conditions; indicators of the level of development of education, healthcare, culture, etc.

In general, indicators of the standard of living of the population can be classified into the following groups:

- cost: national income, gross domestic product and its share allocated for social needs, the volume of consumption of material goods and services, real incomes of the population, the size of wages, pensions, the level of retail prices for consumer goods and tariffs for paid services, people's savings etc.;
- in-kind: indicators of consumption of certain material goods and services, provision of the population with objects of cultural, household and economic purposes for durable use;
- characterizing the development of sectors of the non-productive social sphere;
- expressed in temporary form: the duration of the working day and working week, the duration and use of non-working and free time, etc .;
- socio-demographic: birth rate, mortality, population growth, average and life expectancy;
- characterizing the state and environmental protection;
- characterizing the level of social security.

The stratification of society turned out to be a particularly acute problem in Siberian regions, which in terms of the complex of living conditions lagged significantly behind the central regions at all periods of social development.

The complex nature of the study was also ensured by the use of materials from monographs, scientific and practical conferences on the living standards of the population, legal acts in the field of social relations, state statistics, and resources of the Internet.

Institutional aspects of the economy blur the border that separates the purely economic aspects of society from social ones. An active search has begun and attempts are being made to develop integrated indicators of well-being on the basis of deepening the concept of quality of life. Increasingly, there is a desire to use the category of “quality of life” as an integral indicator that can evaluate the effectiveness of social policies in modern conditions.

Among the most modern and interesting works in the field of conceptual development of the concepts of “standard of living” and “quality of life”, as well as from the point of view of developing systems of integral and generalizing indicators of the level and quality of life of the population, in our opinion, the work of scientists of SPBEUiF N. BUT. Gorelova, Yu.V. Kraskovs, I.V. Yakovleva, which analyzed the problems of assessment and quality of life of the population [3].

An in-depth study of the relationship between the level and quality of life of the population allows us to identify four main stages in the development of the concept of “quality of life” in the domestic scientific literature:

1. Antagonism (early 1960s-early 1970s).
2. Criticism and ideological opposition (late 1970s-early 1980s).
3. Quantification development (early 1990s).
4. Conceptual development (starting from the second half of the 1990s to the present day).

Thus, we can state that now the Russian scientific discussion related to the problems of quality of life, basically comes down to a search for a quantitative criterion for assessing the effectiveness of socio-economic design carried out at various structural levels.

To this end, to calculate the integral indicator of the quality of life of the population, one should take into account systemic transformation, which includes economic, social, cultural and other transformational processes. The transition from one social system to an alternative is inevitably associated with fundamental, in a sense, institutional changes [4].

The results of the social transformation were presented at the tenth international symposium “Where is Russia going?”, Regularly held by the Interdisciplinary Academic Center for Social Sciences (intercenter) and the Moscow Higher School of Social and Economic Sciences. The first and second symposia took place in December 1993 and 1994, and the third in January 1996. Subsequently, the symposium is punctually held in the third week of January of each year.

The main task of this symposium is to summarize the general semantic result of the past decade, to identify the main direction of the “transition” made by Russia, to summarize the most fundamental, qualitative results of the transformation of Russian society, to determine options for the future of Russia [5].

Issues discussed at the symposium meetings:

- what institutional system was formed in Russia;
- how the social structure of society has changed;
- increased or rather decreased the human (cultural, activity, dynamic) potential of Russia?

A significant contribution to the discussion on the problems of transforming the quality of life of the population was made by the work of B.M. Genkin's “Introduction to Meta-Economics and the Foundations of Economic Sciences”, in which the “quality of life” is characterized by the degree of

satisfaction of human needs, defined in relation to the relevant norms, customs and traditions, as well as in relation to the level of personal claims [9-10].

With this interpretation, the role of sociological methods for studying the quality of life of the population increases. B.M. Genkin notes that the quality of any object or process can be established only in relation to a certain standard, which is determined by norms, standards, rules, traditions, customs. In our opinion, this interpretation is closest to the concept of subjective well-being, which goes beyond the boundaries of the economy, and therefore the social orientation of the category "quality of life" is being strengthened.

The concept of "quality of life" is intended to characterize the quality side of people's lives. Moreover, the quality of life is characterized not only by objective living conditions, but also by the value attitude of people to the conditions of their life, their subjective perception. Thus, under the influence of global processes, the category of "quality of life" is beginning to occupy an increasing, although not very definite, place in Russian scientific literature. This concept still remains not completely clear and unambiguous and is used in many ways that do not coincide with each other, with which it is loaded depending on the goals and tasks that are solved with the help of one or another researcher.

The theoretical and methodological analysis of the essence and content of the "quality of life" category made it possible to single out several basic, most used meanings that use this concept in modern Russian discourse:

- as a general designation of accepted factual standards, which the population as a whole and social policy are guided in their behavior;

- as a designation focused on certain high standards, standards that are used to criticize real social policy. In this case, as a rule, it is not customary to talk about the specific content and parameters of indicators that form the alleged samples and standards. Only critical areas of social life are mentioned, for example, public health, uneven distribution of income, unjustified inequality in the level of consumption, environmental and criminal situation, etc .;

- as a designation of the general vector of deviations (both positive and negative) of the real life of the population from statistical and ideal samples. This semantic load on this category is closely related to the previous one. Their difference lies in the fact that in this case, the initially given negative assessment of the actual quality of life is not demonstrated. A category is used as a tool designed to evaluate reality by demonstrating its "real" place between the extreme states of the continuum: unsatisfactory (poor-quality) state — satisfactory (quality — moving toward the ideal, standard) state;

- as a complex of samples, standards, standards, performing the functions of indicators (criteria) for identifying problem areas in the life of the population and its individual layers and groups;

- as some integral characteristic of human being. The quality of life is considered as the main integral indicator, designed to comprehensively characterize the degree of development and completeness of satisfaction of the whole complex of needs and interests of people. In this regard, it is necessary to solve the problem of comparing subjective characteristics in one integral indicator.

Conclusion

The problems associated with the study of the quality of life began to develop more actively thanks in large part to the positions that the phenomenological methodology of qualitative methods began to gain - the methodology of qualitative sociology. Therefore, discussions about the quality of life were at the same time a reaction to positive sociology. One of the main postulates of the latter is the idea that truly scientific knowledge is necessarily associated with a quantitative form of presentation of the results of research on any phenomenon. It is considered truly known if it can be represented in quantitative form or it can be calculated.

It should also be noted that the widespread use of the concept of "quality of life" in sociological practice was associated with the strengthening of the position of the human rights movement and the strengthening of related international and national institutions.

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PROFIT CALCULATIONS FOR THE COMPANY MAIL SERVICES

Abstract: *A quantitative model of the profitability of the system of business processes, types of services, cost centers of the company for postal services has been developed. With a minimum number of input data, the profit level of Express Mail is 16%., Ordinary Mail - 36.47%., the profit level for two services is 23.40%. A scenario analysis was carried out in which the profit level for two types of services becomes equal to 27.66%, which is more than 25%.*

Key words: *Express Mail, Ordinary Mail.*
Language: *Russian*
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РАСЧЕТЫ ПРИБЫЛИ ДЛЯ КОМПАНИИ ПО ПОЧТОВЫМ УСЛУГАМ

Аннотация: *Разработана количественная модель прибыльности системы бизнес-процессов, видов услуг, мест возникновения затрат компании по почтовым услугам (ПУ). При минимальном числе исходных данных уровень прибыльности срочных ПУ равен 16%., обычных ПУ - 36,47%., а уровень прибыли по обоим услугам равен 23,40%. Проведен сценарный анализ, при котором уровень прибыли по обоим видам услуг становится равным 27,66%, что больше 25%.*

Ключевые слова: *срочные почтовые услуги, обычные почтовые услуги.*

Введение

В настоящее время наблюдается увеличение тарифов на почтовые услуги. Мы, клиенты, вынуждены смириться с этим – другого способа нет. Но если компания по оказанию почтовых услуг начнет снижать себестоимость своих услуг, то будут снижаться и тарифы.

Здесь мы начинаем исследование путей правильного расчера расходов, доходов, мест возникновения затрат, прочих факторов бизнес-процессов [1-4].

В последнее время в странах СНГ наблюдается рост тарифов на доставку ПО. почтовой связи расширяются вместе с проникновением новых технологий (информационных, финансового инжиниринга, интернет-отслеживание посылок и отправлений в телефоне, гибридная почта и др. [5-13]) Бумажные уведомления часто не применяют, вместо них используют сотовую связь, SMS-сообщения. Появились сайты, содержащие номера почтовых отделений, где обрабатывались ценные бандероли с грифом «заказное», по этим номерам можно проследить маршрут бандероли до конечного адресата.

Соответствующие подобным видам услуг затраты нами будут рассчитаны отдельно. Данные этих затрат будут даны как дополнения к Таблицам №1 - №8.

Новые бизнес-процессы, функции, операции до такой степени стала частью мировоззрения компании по ПО, что появились соответствующие программные решения, скоро будут разработаны и будут использоваться для

обеспечения новой системы вычисления затрат, доходов, когнитивных (неизмеряемых) показателей от реализованных услуг компании. Идет ли речь о руководстве, складских работниках и снабженческом персонале или о прочих агентах, наши расчеты обеспечивают менеджерам возможность сопоставить и сравнить их производственные показатели с показателями предыдущих лет и снижать себестоимости почтовых услуг для клиентов и тарифы. Технологические, телекоммуникационные новшества и изменения приводят к улучшению взаимоотношений с клиентами. Перемены в системе компании и перемены в расчетах за доставку, перемещениях инвентаря и изменения заработной платы дадут выгоду компании и клиенты компании получат их. Будет уместным фраза «…вот и все, что потребовалось, чтобы превратить убыточного клиента в доходного".

Здесь мы ограничимся анализом только двух видов услуг: обычные и срочные почтовые отправления.

Существующая бухгалтерская система не дает полного представления о себестоимости предоставляемых услуг. Нужна более точная информация по себестоимости.Расчет себестоимости производится путем деления всех затрат (в целом и по каждой статье в отдельности) на общее количество выработанной за отчетный период продукции

Наша цель – определить себестоимость предоставления каждой услуги и определить их прибыльность. Предположим: компания олучила общий доход в размере $47 миллионов.

Необходимо определить пути увеличения прибыльности предоставляемых услуг. Задача руководства - достичь уровня прибыльности 25% по обеим услугам.

Задача: установить фактические расходы и уровень прибыльности, приходящиеся на конкретных категорий клиентов.

Для этого необходимо достичь подлинного понимания причинно-следственных связей, соеди няющих внутренние ресурсы с прибыльностью клиента. Распознать потенциальные проблемы, определить возможности для совершенствования и претворить эти возможности в жизнь.

Источники затрат компании. За один год зарплата (все расходы, связанные с выплатой зарплаты и премий, зафиксированные в главной книге учета хозяйственных операций) составила $20 миллионов. Все накладные расходы за год составили $16 миллионов. Эти 2 вида денежных расходов связаны с четырьмя основными видами деятельности компании по почтовым отправлениям (ПО): распределение по филиалам компании, региональная сортировка, контроль (правильности сортировки) и доставка в пуцкт назначения. Два числа () заданы, требуется разбить их на разное число частей для каждой ситуации, рассмотренных ниже. При каждой ситуации есть свои перечни как видов деятельности, так и места возникновения затрат с присущими им затратами на специчные расходные материалы. Многовариантные и многокомпонентные по числу слагаемых разбиения нас не должны затруднять и не делать нерешаемые постановки задач. Особенно в случаях, когда известно одно число, а требуется обоснованно, рационально и оптимально по заданному критерию на несколько частей.

Рассмотрим пример. Пусть для бизнес-процесса заданы 2 директивных показателя - 2 дроби 2/5 и 1/7, означающие доли d1, (d4+d5) из 5-ти долей разбиения d1,d2,d4,d5 неизвестного целого числа S. Требуется определить неизвестные целые числа S1,S2,S4,S5 разбиения неизвестного целого числа S на целые слагаемые S=S1+S2.

Все особенности бизнес-процессов хорошо известны. В частности, известны количественные ограничения, присущие бизнес-процессу: d1+d2=1, d4=d5=1/7, S3=S4+S5. Они обусловлены начальными данными 2/5 и 1/7. Задача определения неизвестных целых чисел S1,S2,S4,S5 разбиения неизвестного числа S на целые слагаемые S=S1+S2 при вышеприведенных ограничениях решается просто. Целым числом, делящимся на простые числа 5 и 7, является число 35 (или k*35, k=2,…,100). Следовательно, S1=(2/5)*35=14. S2=(3/5)*35=21.Так как имеем заданные значения d4=d5=1/7, то имеем значения: S3=(1/7)*35=5,S4=d1*S3=(2/5)*5=2,S5=d2*S3=(3/5)*5=3. Проверяем выполнимость ограниче ний: S3=S4+S5=2+3=5, S=S1+S2=14+21.

Ниже в расчете прибыли

Затраты на виды деятельности компании по ПО. Зарплата распределяется по видам деятельности согласно количеству времени, потраченного всеми сотрудниками на каждый из видов деятельности при мест возникновения затрат (МВЗ):

МВЗ1=Распределение по филиалам 80 час.
МВЗ2=Региональная сортировка 80 час.
МВЗ3=Контроль 40 час
МВЗ4=Доставка 200 час.

Затраты расходных материалов распределяются по видам деятельности (по бизнес-процессам БП1 и БП2, затраты по которым рассчитываются при АВС-методе) согласно фактическим расходам в МВЗ1, МВЗ2, МВЗ3, МВЗ4.

МВЗ1=Распределение по филиалам 4 миллиона

МВЗ2=Региональная сортировка 2 миллиона

МВЗ3=Контроль 4 миллиона
МВЗ4=Доставка 6 миллионов

Распределение Затрат расходных материалов по филиалам. Расходы на этот вид деятельности связаны главным образом с перемещением пакетов по хранилищу.

75% = (3 млн) затрат связаны со срочными отправлениями и 25%(1 млн) - с обычными.

МВЗ2=Региональная сортировка

Региональная сортировка включает в себя непосредственно сортировку и проверку. Компания по отправке ПО каждый год сортирует 60,000 пакетов со срочными отправлениями и 40,000 пакетов с обычными.

Тогда Затраты расходных материалов при Региональной сортировке пакетов со срочными отправлениями равны1,2 млн:2 млн*(6\10)=1,2 млн.

Затраты расходных материалов при Региональной сортировке пакетов с обычными отправлениями = 2 млн *(4\10)=0,8 млн.

МВЗ3=Контроль

Расходы на Контроль возникают вследствие задержки или утери почтового отправления. Расходы связаны с дополнительными работами или выплатами компенсаций. Расходы на Контроль не зависят от вида отправлений. В этом году отслеживалось следующее количество пакетов:

- 3000 для срочных отправлений
- 2000 для обычных отправления

МВЗ4=Доставка

Расходы на администрирование доставки следует распределять пропорционально количеству доставленных отправлений:

· Срочные отправления 12,000
· Обычные отправления 4,000

Полученные доходы (по видам БП, т е по видам услуг) зафиксированы в следующих значениях.

Доходы по каждой услуге за один год составили:

· Срочные отправления 30 миллионов
· Обычные отправления 17 миллионов

Подзадачи: Используя описание компании, создайте АВС-модель компа нии.

1. Затраты на «срочные отправления»
2. Уровень прибыли (Доходы-Затраты) для срочных отправлений
3. Уровень прибыли в процентах ((Доходы-Затраты)/Доходы)*100 для срочных отправлений
4. Затраты на обычные отправления
5. Уровень прибыли для обычных отправлений?
6. Уровень прибыли в процентах для обычных отправлений
7. Имеет ли Parcel Express уровень прибыли 25% по обоим услугам?
8. Какие рекомендации вы можете предложить для Parcel Express.?
9. Что влияет на активность Контроль? (Какие факторы являются драйверами затрат?)
10. Прибыльность абонентов, Прибыльность услуг.

Исходные данные

В развитие идей и методов АВС – анализа появились методологии *раздельного учета затрат по видам деятельности*, учета по центрам прибыли и затрат (а также по центрам ответственности), функционально-стоимостного планирования (АВР - activity based planning).

В отличие от нормативного бухгалтерского учета, отвечающего в основном на вопрос “сколько потрачено всего и какова себестоимость произведенных товаров и услуг ?”, концепция АВМ концентрируется на вопросах:

- какие именно израсходованы ресурсы и сколько (в деньгах и натуре),
- какова ресурсоемкость объектов затрат,
- почему эта ресурсоемкость такая, а не ниже или выше,
- какие производственные процессы и как потребляют ресурсы и как участвуют в производстве продукции и услуг,
- есть ли у производственного процесса потенциал снижения ресурсоемкости ,
- есть ли у производственного процесса потенциал повышения производительности (отдачи),
- сколько и каких ресурсов нужно иметь, чтобы обеспечить плановый выпуск продукции и услуг (с требуемыми характеристиками по аналитическим разрезам),
- как лучше реорганизовать бизнес-процессы, чтобы уменьшить ресурсоемкость объектов затрат без потери их качества.

В концепции АВМ под объектами затрат понимаются не только продукция и услуги, производимые компанией (что традиционно для бухгалтерского учета), но также и другие объекты управленческого учета: каналы сбыта продукции и услуг, вертикальные и горизонтальные сегменты рынка, отдельные клиенты компании, регионы поставки и любые другие аналитические характеристики реализованной продукции и услуг.

Базовые элементы расчетов

Базовыми элементами в наших расчетах являются:

1. модель ресурсов,
2. модель производственных процессов (бизнес-процессов),
3. модель объектов затрат,

4. правила разнесения затрат ресурсов по процессам,

5. правила разнесения интенсивностей процессов по объектам затрат.

Практическая реализация нашей методологии расчетов состоит из этапа моделирования (проектированя) и этапа модельных расчетов. На этапе моделирования формализуются понятия ресурсов, бизнес-процессов, объектов затрат, правила разнесения затрат ресурсов и правила разнесения интенсивностей процессов по объектам затрат. На 1-м этапе идет учет затрат по элементам , затем затраты распределяются по процессам. На 3-м этапе опред-ют общую величину затрат за месяц. Далее распределяют затраты в зависимости от характера прозводства видов продукции. В конце определяют себестоимость месячного выпуска по изделиям.

На этапе расчетов осуществляется фактический расчет распределения ресурсов по процессам и интенсивностей процессов по объектам затрат.

Результатом этой двухэтапной процедуры является распределение ресурсов по объектам затрат

Математическая часть может быть точной в рамках точности и достоверности ЗАДАНЫХ исходных данных, поэтому математические описания моделей достоверны в рамках самих этих моделей и могут не иметь ничего общего с реальным миром, что в общем то и приводит к бесконечным спорам, не рождающим истину. Скорее всего назрела уже необходимость какого то другого способа обобщения известных и прогнозирования путей познания не известных сущностей бизнеса. Древние ребята не имели инструментария экспериментального познания бизнеса и пользовались единственно доступным - своим разумом.

Мы воспользуемся хорошо известным методом - АВС-анализом. АВС означает Activity Based Costing (калькуляция на основе деятельности).При АВС-анализе предметная область формулируется в других терминах.

Ресурсы или Источники затрат компании определены в 2-х формах: стоимостном ($) и временном (час). Ресурсы привязаны к МВЗ 4-х видов. Тогда **распределение ресурсов** по МВЗ следующее:

Таблица 1. Распределение ресурсов по МВЗ
(модель ресурсов)

	Объекты затрат	Ресурсы для пок рытия текущих расходов по ПО + для з\п (БП1+БП2)	ресурсы времени (час) (БП1+БП2)	ресурсы времени (в %) (БП1+БП2)
МВЗ 1	Затраты времени работников при распределении ПО по филиалам	7,2	80	20,00%
МВЗ 2	распределение затрат времени работников при сортировке ПО в регионах	7,2	80	20,00%
МВЗ 3	распределение затрат времени работников при контроле ПО	3,6	40	10,00%
МВЗ 4	распределение затрат времени работников при доставке ПО	18	200	50,00%
	Всего	36	400	100%

Модель объектов затрат

Затраты расходных материалов и затраты заработной платы распределяются по видам деятельности (по БП1 и БП2, затраты по которым рассчитываются при АВС-анализе) согласно фактическим расходам в МВЗ1, МВЗ2, МВЗ3, МВЗ4 (модель объектов затрат).

Таблица 2. Фактические расходы в МВЗ1, МВЗ2, МВЗ3, МВЗ4

	Объекты затрат	факт-е затраты на з.п ($млн) Всего	факт-е затраты расходных материалов на БП ($млн) Всего	кол-во единиц	факт-е затраты на з.п по типам МВЗ($млн)	факт-е затраты расходных материалов на типы МВЗ ($млн)	факт затраты на БП (в %)	Сумма затрат по МВЗ
МВЗ 1	Затраты времени работников при распределении ПО по филиалам По срочным ПО	4	4	75%	3	3	25,0%	8
	По обычным ПО			25%	1	1		
МВЗ 2	распределение затрат времени работников при сортировке ПО в регионах По срочным ПО	4	2	60000	2,4	1,2	12,5%	6
	По обычным ПО			40000	1,6	0,8		
МВЗ 3	распределение затрат времени работников при контроле ПО По срочным ПО	2	4	3000	1,2	2,4	25,0%	6
	По обычым ПО			2000	0,8	1,6		
МВЗ 4	распределение затрат времени работников при доставке ПО По срочным ПО	10	6	12000	7,5	4,5	37,5%	16
	По обычным ПО			4000	2,5	1,5		
	Всего	20	16		20	16	100%	36

Правила разнесения ресурсов по видам услуг (процессам)

Распределение ресурсов (на расходные материалы и з\п) по видам услуг (срочные ПО и обычные ПО) следующее:

Таблица 3. Распределение ресурсов по видам услуг (срочные ПО и обычные ПО)

	Ресурсы (млн$) для ПО				зарплата (млн$)	
	Ресурсы для срочных и обычных ПО ($)	ресурсы времени (час)	Ресурсы для срочных ПО ($)	Ресурсы для расходов по обычных ПО (млн$)	факт-е затраты на з.п по типам МВЗ($млн) для срочных ПО	факт-е затраты по типам МВЗ($млн) для обычных ПО
МВЗ 1	7,2	80	4	3,2	3	1
МВЗ 2	7,2	80	4	3,2	2,4	1,6
МВЗ 3	3,6	40	2	1,6	1,2	0,8
МВЗ 4	18	200	10	8	7,5	2,5
Итого	**36**	**400**	**20**	**16**	**14,1**	**5,9**
Всего				**36**		**20**

Ресурсы на «расходные материалы» в МВЗ 1 по срочным ПО равны доле времени (=80\400) от $20 млн, т е =(1\5)*20=4 ($млн).

Ресурсы на «расходные материалы» в МВЗ 2 по срочным ПО равны доле времени (=80\400) от $20 млн, т е =(1\5)*20=4 ($млн).

Ресурсы на «расходные материалы» в МВЗ 3 по срочным ПО равны доле времени (=40\400) от $20 млн, т е =(1\10)*20=2 ($млн).

Ресурсы на «расходные материалы» в МВЗ 1 по срочным ПО равны доле времени (=200\400) от $20 млн, т е =(1\2)*20=10 ($млн).

Сумма 4+4+2+10=20 ($млн).

Аналогично вычисляются ресурсы по обычным ПО:

Ресурсы на «расходные материалы» в МВЗ 1 по обычным ПО равны доле времени (=80\400) от $16 млн, т е =(1\5)*16=3,2 ($млн).

Ресурсы на «расходные материалы» в МВЗ 2 по обычным ПО равны доле времени (=80\400) от $16 млн, т е =(1\5)*16=3,2 ($млн).

Ресурсы на «расходные материалы» в МВЗ 3 по обычным ПО равны доле времени (=40\400) от $16 млн, т е =(1\10)*16=1,6 ($млн).

Ресурсы на «расходные материалы» в МВЗ 1 по обычным ПО равны доле времени (=200\400) от $16 млн, т е =(1\2)*16=8 ($млн).

Сумма 3,2+3,2+1,6+8=16 ($млн).

Ресурсы на «зарплату» в МВЗ 1 по срочным ПО равны доле времени (=80\400) от $20 млн, т е =(1\5)*20=4 ($млн).

Ресурсы на «зар. плату» в МВЗ 2 по срочным ПО равны доле времени (=80\400) от $20 млн, т е =(1\5)*20=4 ($млн).

Ресурсы на «зар. плату» в МВЗ 3 по срочным ПО равны доле времени (=40\400) от $20 млн, т е =(1\10)*20=2 ($млн).

Ресурсы на «зар. плату» в МВЗ 1 по срочным ПО равны доле времени (=200\400) от $20 млн, т е =(1\2)*20=10 ($млн).

Сумма 4+4+2+10=20 ($млн).

Вычислим ресурсы по обычным ПО:

Ресурсы на «зар. плату» в МВЗ 1 по обычным ПО равны доле времени (=80\400) от $16 млн, т е =(1\5)*16=3,2 ($млн).

Ресурсы на «зар. плату» в МВЗ 2 по обычным ПО равны доле времени (=80\400) от $16 млн, т е =(1\5)*16=3,2 ($млн).

Ресурсы на «зар. плату» в МВЗ 3 по обычным ПО равны доле времени (=40\400) от $16 млн, т е =(1\10)*16=1,6 ($млн).

Ресурсы на «зар. плату» в МВЗ 1 по обычным ПО равны доле времени (=200\400) от $16 млн, т е =(1\2)*16=8 ($млн).

Сумма 3,2+3,2+1,6+8=16 ($млн).

Правила разнесения затрат ресурсов по процессам.

Рассмотрим азнесение затрат на зарплату по 4 МВЗ и 2 услугам (БП-процессам). Они – затраты, определены по величине долей (в %-ах) из Таблицы 4. в ней приведены результаты разнесения затрат на зарплату по МВЗ и по процессам.

Таблица 4. Расходы на зарплату (млн$)

Заданные итогов ые фактические затраты на з.п ($млн) на 2 вида услуг	кол-во единиц срочных ПО	кол-во единиц обычных ПО	вычис-ые затраты на з.п по типам МВЗ($млн) для срочных ПО	вычис-ые затраты по типам МВЗ($млн) для обычных ПО
4	75%	25%	3	1
4	60000	40000	2,4	1,6
2	3000	2000	1,2	0,8
10	12000	4000	7,5	2,5
Итого= 20			**14,1**	**5,9**
				Итого =20

Вычисляемые затраты на з.п по типам МВЗ ($млн) для срочных ПО расчитыва ются по следующим правилам:

Затраты на з.п для срочных ПО по МВЗ 1 ($млн) = 4*75%=3

Затраты на з.п для срочных ПО по МВЗ 2 ($млн)=4*[60000/(60000+40000)] =2,4

Затраты на з.п для срочных ПО по МВЗ 3 ($млн)=2*[3000/(3000+2000)] =1,2

Затраты на з.п для срочных ПО по МВЗ 4 ($млн)=10*[12000/(12000+4000)] =7,5

Сумма 3+2,4+1,2+7,5=14,1 ($млн). Что равно фактическим затратам на з.п по типам МВЗ ($млн) только для срочных ПО.

Вычисляемые затраты на з.п по типам МВЗ ($млн) для обычных ПО расчитыва ются по следующим правилам:

Затраты на з.п для срочных ПО по МВЗ 1 ($млн) = 4*25%=1

Затраты на з.п для срочных ПО по МВЗ 2 ($млн)=4*[40000/(60000+40000)] =1,6

Затраты на з.п для срочных ПО по МВЗ 3 ($млн)=2*[2000/(3000+2000)] =0,8

Затраты на з.п для срочных ПО по МВЗ 4 ($млн)=10*[4000/(12000+4000)] =2,5

Сумма 1+1,6+0,8+2,5=5,9 ($млн). Что равно фактическим затратам на з.п по типам МВЗ ($млн) только для обычных ПО.

Вывод: Фактические затраты на з.п по типам МВЗ ($млн) только для срочных ПО плюс Фактические затраты на з.п. по типам МВЗ ($млн) только для обычных ПО равно 14,1 + 5,9 = 20 $млн.

Разнесение затрат на «расходные материалы» по 4 МВЗ и 2 услугам (БП-процессам)

Рассмотрим таблицу разнесения затрат на «расходные материалы» по 4 МВЗ и по 2 процессам: Так как графы «кол-во единиц срочных ПО» и «кол-во единиц обычных ПО» потребуются нам в данном пункте, то приведем более расширенную таблицу :

Таблица 5. Затраты на «расходные материалы» по 4 МВЗ и по 2 процессам

Расходы на зарплату (млн$)					расходы (млн$) на мат-лы		
Итого факт-е затраты на з.п ($млн) на 2 вида услуг	кол-во единиц срочных ПО	кол-во единиц обычных ПО	вычис-ые затраты на з.п по типам МВЗ($млн) для срочных ПО	вычис-ые затраты по типам МВЗ($млн) для обычных ПО	Итого факт-е затраты на расходные материалы ($млн) на 2 вида услуг	затраты ($млн)на срочные ПО	**затраты ($млн)на обычные ПО**
4	75%	25%	3	1	4	3	1
4	60000	40000	2,4	1,6	2	1,2	0,8
2	3000	2000	1,2	0,8	4	2,4	1,6
10	12000	4000	7,5	2,5	6	4,5	1,5
20			**14,1**	**5,9**	**16**	**11,1**	**4,9**
				20			**16**

Вычисляемые затраты на «расходные материалы» по типам МВЗ ($млн) для срочных ПО расчитыва ются по следующим правилам:

Затраты на «расходные материалы» для срочных ПО по МВЗ 1 ($млн) = 4*75%=3

Затраты на «расходные материалы» для срочных ПО по МВЗ 2 ($млн) =2*[60000/(60000+40000)] =1,2

Затраты на «расходные материалы» для срочных ПО по МВЗ 3 ($млн) =4*[3000/(3000+2000)] =2,4

Затраты на «расходные материалы» для срочных ПО по МВЗ 4 ($млн) =6*[12000/(12000+4000)] =4,5

Сумма 3+1,2+2,4+4,5=11,1 ($млн).

Это вычисленные затраты на «расходные материалы» по типам МВЗ ($млн) только для срочных ПО. Методом АВС-анализа.

Вычисляемые затраты на «расходные материалы» по типам МВЗ ($млн) для обычных ПО рассчитываются по следующим правилам:

Затраты на «расходные материалы» для срочных ПО по МВЗ 1 ($млн) = 4*25%=1

Затраты на «расходные материалы» для срочных ПО по МВЗ 2 ($млн) =2*[40000/(60000+40000)] =0,8

Затраты на «расходные материалы» для срочных ПО по МВЗ 3 ($млн) =4*[2000/(3000+2000)] =1,6

Затраты на «расходные материалы» для срочных ПО по МВЗ 4 ($млн) =6*[4000/(12000+4000)] =1,5

Сумма 1+0,8+1,6+1,5=4,9 ($млн).

Это вычисленные затраты на «расходные материалы» по типам МВЗ ($млн) только для обычных ПО. Методом АВС-анализа.

Вывод: Вычисленные затраты на «расходные материалы» по типам МВЗ ($млн) только для срочных ПО плюс Вычисленные затраты на «расходные материалы» по типам МВЗ ($млн) только для обычных ПО равно

11,1 + 4,9 = 16 $млн .

Себестоимости 2-х видов услуг

В конце производственного цикла после вычисления затрат можно оценить и Себестоимость, которая равна «текущие затраты на производство и реализацию услуги, включает стоимость потребленных средств производства, средства на оплату труда, прямые и косвенные расходы, издержки на реализацию».

Себестоимость j-го промежуточной работы складывается из себестоимости C_j , добавленной на j-й стадии технологического цикла, и стоимости потребленной в j-м звене продукции или работы предыдущего передела.

Таблица 6

измерители кол-ва		(доходы)/(изм\п+р.мат змерители кол-ва) в конце цикла БП		себестоимость (млн$) Ср ПО и Об ПО в МВЗ		доходы (млн$) от видов услуг (срочных ПО (БП1) и обычных ПО (БП2)		прибыль (млн$) от видов услуг (срочных ПО (БП1) и обычных ПО (БП2)		**Уровень прибыли**	**Уровень прибыли**
кол-во единиц для срочных ПО	**кол-во единиц для обычных ПО**	**доход от 1-го доставленного срочного ПО**	**доход от 1-го доставленного обычного ПО**	**себест-ть срочных ПО**	**себест-ть обычных ПО**	**доходы от срочных ПО (БП1)**	**доходы от обычных ПО (БП2)**	**Объем прибыли для срочных ПО ($)**	**Объем прибыли для обычных ПО (млн$)**	для срочных ПО (%)(БП1)	для обычных ПО (%)(БП2)
75%	25%	0	0	6,00	2,00	0,00	0,00	0	0	0	0
60000	40000	0	0	3,60	2,40	0,00	0,00	0	0	0	0
3000	2000	0	0	3,60	2,40	0,00	0,00	0	0	0	0
12000	**4000**	**0,0025**	**0,004**	12,00	4,00	30,00	17,00	**4,80**	**6,20**	0	0
Итого				**25,20**	**10,80**	**30,00**	**17,00**	**4,80**	**6,20**	16%	36,47%
Всего					36		**47**		**11**		23,40%

Вычисляемые себестоимости по типам МВЗ ($млн) для срочных ПО расчитыва ются по следующим правилам:

себестоимость срочных ПО по МВЗ 1 ($млн) = 3+3=6

себестоимость срочных ПО по МВЗ 2 ($млн) =2,4+1,2=3,6

себестоимость срочных ПО по МВЗ 3 ($млн) = 1,2+2,4 =3,6

себестоимость срочных ПО по МВЗ 4 ($млн) = 7,5+4,5 =12

Сумма 6+3,6+3,6+12 =25,2 ($млн).

Это вычисленные себестоимости по 4 типам МВЗ ($млн) только для срочных ПО. Методом АВС-анализа.

Вычисляемые себестоимости по типам МВЗ ($млн) для обычных ПО расчитываются по следующим правилам:

себестоимость обычных ПО по МВЗ 1 ($млн) = 1+1=2

себестоимость обычных ПО по МВЗ 2 ($млн) =1,6+0,8=2,4

себестоимость обычных ПО по МВЗ 3 ($млн) = 0,8+1,6 =2,4

себестоимость обычных ПО по МВЗ 4 ($млн) = 2,5+1,5 =4

Сумма 2+2,4+2,4+4 =10,8 ($млн).

Это вычисленные себестоимости по 4 типам МВЗ ($млн) только для обычных ПО. Методом АВС-анализа.

Вывод: Вычисленные себестоимости только срочных ПО в разрезе типов МВЗ ($млн)

плюс Вычисленные себестоимости только для обычных ПО в разрезе типов МВЗ ($млн) равно 25,2 + 10,8 = 36 $млн.

Прибыльности почтовых услуг.

Количественная модель прибыльности системы позволяет осуществлять раскладку всего производственного процесса в компании, определяя издержки каждого процесса в ходе такого анализа. Введенные данные со всех производственных участков компании - от истоков снабженческой сети вплоть до усилий по сбыту и конечных узлов снабженческой сети. Компания должна суметь установить оптимальные издержки, приходящиеся на один элемент производственной деятельности. Надо

установить ключевые факторы, вызывающие генерацию расходов - носителей издержек.

Нам предстоить найти современные носители издержки и оценить эти носители, должны более полно извлекать соответствующие показатели из нашей будущей системы расчта прибыльности.

Прибыль зависит от разности доходов и расходов. Расходы мы вычислили выше в разных разрезах. Доходы же возникают только в момент, когда распределение затрат времени работников при доставке ПО. Как по срочным ПО , так и по обычным ПО. В том же этапе возникают и затраты (МВЗ 4). Доходы от доставки срочных ПО составили:

Доходы (по видам БП, т е по видам услуг) по каждой услуге за 2002 год составили:

· Срочные отправления 30 миллионов

· Обычные отправления 17 миллионов

Кроме затрат при МВЗ 1, МВЗ 2, МВЗ 3, в период времени , соответствующем МВЗ 4 имели место затраты:

срочных ПО по МВЗ 4 ($млн)= 7,5+4,5 =12

обычных ПО по МВЗ 4 ($млн)= 2,5+1,5 =4

Уровень прибыли (Доходы-Затраты) для срочных отправлений равны 30 – 25,2 =**$4,80 $млн.**

Уровень прибыли в процентах ((Доходы-Затраты)/Доходы)*100 для срочных отправлений равен [4,80/ 30]*100% = **16%.**

Затраты на обычные почтовые отправления равны $10,80 млн.

Уровень прибыли для обычных отправлений равен (17 – 10, 80) = **$6,20 млн**.

Уровень прибыли в процентах для обычных отправлений (17 – 10, 80) / 17 = **36,47%.**

Уровень прибыли по обоим услугам равен (47-36)/47= 23,40%. Тогда ответ на вопрос:

Имеет ли компания уровень прибыли 25% по обоим услугам? Будет отрицательным: 23,40% < 25%. Свод результатов расчетов см. ниже в Таблице 8 Приложения.

Сценарный анализ («что, если…») для достижения уровня прибыли 25% по обоим услугам

Какие рекомендации вы можете предложить для компании по отправке ПО.?

Цель: достичь уровня прибыли по обоим услугам 25%.

Сценарий №1. Уменьшить расходы по 1-ой услуге.

Итого фактические затраты на зарплату ($млн) по ведению бизнеса 2-х видов услуг становится равным 8 млн

дает 21% Уровня прибыли в процентах ((Доходы-Затраты)/Доходы)*100 для срочных отправлений и 39,41% - для Уровня прибыли в процентах для обычных отправлений. Уровень прибыли по обоим услугам становится равным 27,66%, что больше 25%.

Рекомендации для компании по предоставлению ПО.

1. Уменьшить расходы по 1-ой услуге – доставке срочных ПО на 20%, за счет уменьшения итоговых фактических затрат на заработную плату ($млн) сотрудникам, работающих по 2 видам услуг: затраты уменьшатся с 10 до 8 ($млн).

2. Уменьшить затраты ресурсов вида «Ресурсы для срочных ПО ($)» с 10 до 8 ($млн). Свод результатов расчетов приведены в Таблице 2 Приложения.

Заключение

Используя этот подход можно рассчитать затраты и доходы по банковским услугам, по доставке пенсий в сельские населенные пункты, бандеролей, ценных писем, служебных документов для физических и юридических лиц (суды, налоговые службы, интернет-магазины , мелкие новинки товаров для населения, рассылаемые производителями для бизнеса «приманка и крючок»).

Руководствуясь цифрой мозаикой из приведенных таблиц, менеджеры могут сопоставить многие свои расходы по доставке для каждого клиента. Если их цифры оказываются слишком высокими, системные средства позволяют легко углубиться в дальнейшее изучение соответствующих данных и установить, почему стоимость доставки слишком высока и, главное, что можно предпринять для снижения этой стоимости.

Аналогичные отчеты описывают также связи инвентаризационных, административных и маркетинговых операций с прибылью от клиентов. Мы действительно наблюдаем, как использование этой системы становится повсеместным в нашей организации". "Все сотрудники, начиная от менеджеров по продажам и заканчивая агентами по закупкам, администраторами и складскими работниками, используют эту систему.

Таким образом, она оказывает влияние на каждый ключевой участок бизнеса.

В последнее время в странах СНГ наблюдается рост тарифов на доставку ПО. Более того, сфера деятельности почтовых отправлений стала распространяться на не свойственные почте виды услуг. Бумажные уведомления часто не применяют, вместо них используют сотовую связь, SMS-сообщения. Появились сайты, содержащие номера почтовых отделений, где обрабатывались ценные бандероли с грифом

«заказное», по этим номерам можно проследить маршрут бандероли до конечного адресата.

Соответствующие подобным видам услуг затраты нами будут рассчитаны отдельно. Данные этих затрат будут даны как дополнения к Таблицам №1 - №8.

Новые бизнес-процессы, функции, операции до такой степени стала частью мировоззрения компании по ПО, что появились соответствующие программные решения, скоро будут разработаны и будут использоваться для обеспечения новой системы вычисления затрат, доходов, когнитивных (неизмеряемых) показателей от реализованных услуг компании. Идет ли речь о руководстве, складских работниках и снабженческом персонале или о прочих агентах, наши расчеты обеспечивают менеджерам возможность сопоставить и сравнить их производственные показатели с показателями предыдущих лет и снижать себестоимости почтовых услуг для клиентов и тарифы. Технологические, телекоммуникационные новшества и изменения приводят к улучшению взаимоотношений с клиентами. Перемены в системе компании и перемены в расчетах за доставку, перемещениях инвентаря и изменения заработной платы дадут выгоду компании и клиенты компании получат их. Будет уместным фраза «…вот и все, что потребовалось, чтобы превратить убыточного клиента в доходного".

Наложение на наши вычисленные числа определенных связей, моделей и аналитических процессов создают простую и экономически эффективную ФСА-систему. И мы сможем смоделировать путь бандероли и затем рассмотреть каждый участок ее траектории движения и найти сопряженные с ним расходы. Мы можем очень быстро проигрывать сценарии типа "А что, если?" - устраняя определенные расходы для изучения эффекта от такого действия.

Мы хотели получить возможность определять и подвергать доскональному анализу все затраты, связанные с каждым товаром в каждом узле нашей сети, независимо от того, относятся ли они к транспортировке, заработной плате или арендным платежам.

Внедрив наш метод, мы теперь имеем возможность определять подлинную себестоимость товаров и закладывать большую гибкость в транспортную систему рыночных поставок".

В самом простом воплощении модели ресурсов, процессов и объектов затрат могут быть представлены как перечни (списки) соответствующих показателей. В более сложных вариантах эти перечни могут иметь структурную организацию и представляться многомерными моделями предметных областей с соответствующими аналитическими измерениями (аналитическими разрезами).

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Приложение.

Таблица 7

	1		2	3	4	5	6	7	8	9	10	11	12	13	14
	расходы (млн$) на мат-лы			измерители кол-ва		(доходы) з\п+р.мат /(измерители кол-ва) в конце БП		себестоимость (млн$) Ср ПО и Об ПО в МВЗ		доходы (млн$) от видов услуг (ср ПО (БП1) и об ПО (БП2)		прибыль (млн$) от видов услуг (ср ПО (БП1) и об ПО (БП2)		Уровень прибыли	Уровень прибыли для обычных ПО (%)(БП2)
	Итого фактические затраты на расходные материалы ($млн) на 2 вида услуг	затраты ($млн) на срочные ПО	затраты ($млн)на обычные ПО	кол-во единиц для срочных ПО	кол-во единиц для обычных ПО	доход от 1-го доставленного срочного ПО	доход от 1-го доставленного обычного ПО	себест-ть срочных ПО	себест-ть обычных ПО	доходы от срочных ПО (БП1)	доходы от обычных ПО (БП2)	Объем прибыли для срочных ПО ($)	Объем прибыли для обычных ПО (млн $)	для срочных ПО (%)(БП1)	для обычных ПО (%)(БП2)
МВЗ 1	4	3	1	75%	25%	0	0	6,00	2,00	0,00	0,00	0	0	0	0
МВЗ 2	2	1	0,8	60000	40000	0	0	3,60	2,40	0,00	0,00	0	0	0	0
МВЗ 3	4	2	1,6	3000	2000	0	0	3,60	2,40	0,00	0,00	0	0	0	0
МВЗ 4	6	5	1,5	12000	4000	0,003	0,00425	12,00	4,00	0,00	0,00	**4,80**	**6,20**	0	0
Итого	16	11	4,9					25,20	10,80	30,00	17,00	4,80	6,20	**16%**	**36,47 %**
Всего			16						36		47		11		**23,40 %**

Таблица 8

	1		2	3	4	5	6	7	8	9	10	11	12	13	14
	расходы (млн$) на мат-лы			измерители кол-ва		(доход з\п+р.мат ы)/(измерители кол-ва) в конце БП		себестоимость (млн$) Ср ПО и Об ПО в МВЗ		доходы (млн$) от видов услуг (ср ПО (БП1) и об ПО (БП2)		прибыль (млн$) от видов услуг (ср ПО (БП1) и об ПО (БП2)		Уровень прибыли	Уровень прибыли для обычных ПО (%)(БП2)
	Итого факт-е затраты на расходные материалы ($млн) на 2 вида услуг	затраты ($млн) на срочные ПО	затраты ($млн) на обычные ПО	кол-во единиц для срочных ПО	кол-во единиц для обычных ПО	доход от 1-го доставленного срочного ПО	доход от 1-го доставленного обычного ПО	себест-ть срочных ПО	себест-ть обычных ПО	доходы от срочных ПО (БП1)	доходы от обычных ПО (БП2)	Объем прибыли для срочных ПО ($)	Объем прибыли для обычных ПО (млн $)	для срочных ПО (%)(БП1)	для обычных ПО (%)(БП2)
МВЗ 1	4	3	1	75%	25%	0	0	6,00	2,00	0,00	0,00	0	0	0	0
МВЗ 2	2	1	0,8	60000	40000	0	0	3,60	2,40	0,00	0,00	0	0	0	0
МВЗ 3	4	2	1,6	3000	2000	0	0	3,60	2,40	0,00	0,00	0	0	0	0
МВЗ 4	6	5	1,5	12000	4000	0,003	0,00425	10,50	3,50	0,00	0,00	**6,30**	**6,70**	0	0
Итого	16	11	4,9					23,70	10,30	30,00	17,00	6,30	6,70	**21%**	**39,41 %**
Всего			16						34,0		47		13		**27,66 %**

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ROLE OF INNOVATION IN INCREASING EFFICIENCY OF PRODUCTION OF AGRICULTURAL PRODUCTS IN FORESTRY

Abstract: *The article discusses the role of innovation in improving the efficiency of production in forestry. In addition, the author provides information on ongoing work in the Andijan region to develop forestry and the forest fund. Also discussed are the issues of efficient use of forest lands and agricultural production.*

Key words: *forestry, innovative development, promising areas, scientific research. forest fund, tree.*
Language: *English*
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Introduction

JEL: L43; L94; G18

Today, even in the cities, district centers, even villages of our country, you will not be surprised to see unique parks. Immediately you get tired of the natural scenery, the trees, the green world, and you are thrilled to see the recreational facilities. In recent years, our President Sh. M. It opens the door to great opportunities for forestry by Mirziyoev. In particular, the Decree of the President of the Republic of Uzbekistan dated May 11, 2017 No PP-2966 "On the establishment of the State Committee for Forestry" [1]. This Decree sets out the objectives for improving the material and technical base of forestry, job creation and income generation through the use of additional sectors. Also, the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated January 24, 2017 "2" About measures for wide use of forestry facilities, further development of cultivation, preparation and processing of medicinal plants, strengthening of material and technical basis of forestry for 2017 " determines the relevance of this topic.

Literature review

The new economic category of "innovation" was introduced by the Austrian scientist Josef Alois Schumpeter (7. A. Schumpeter, 1883 ... 1950) in the first decade of the 20th century. Innovation issues and a complete description of innovation processes were first considered in the work "Theory of Economic Development" (1911) J. Schumpeter.

J. Schumpeter gave the following definition of innovation - this is the main source of profit: "Profit, in essence, is the result of new combinations ... Without development, there is no profit, without profit there is no development" [3].

"Innovation (innovation) is the end result of innovation activity, which has been realized in the form of a new or improved product sold on the market, a new or improved technological process used in practical activities."

This definition of the concept of "innovation" is the official Russian term in the field of innovation.

By type of innovation are classified into:

- grocery (product innovation) -new products consumed in the sphere of production (as a means of production) or in the sphere of consumption (as a commodity or labor);
- technological (technological innovation) - new technologies (methods) for the production of manufactured or new products;
- organizational and managerial (organizational - managerial innovation) -new methods of organizing work and production management.

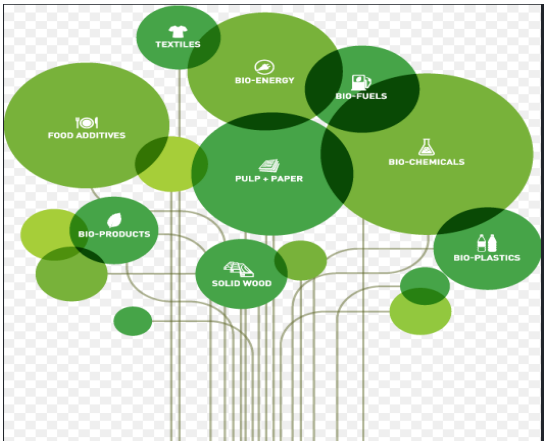

Fig 1. Forest Products types

The concept of "innovative activity" came from the concepts of "innovation" and "innovation process". In a broader sense, innovation is an activity aimed at implementing innovations in all areas of public life. In a narrow sense, innovation is a process aimed at implementing the results of completed scientific research and development, into a new or improved product sold on the market, into a new or improved technological process used in practical activities, as well as related additional scientific research and development [4].

Analysis and results

Innovation activity is carried out by subjects of innovation activity and includes research, development work, personnel training, organization of production, marketing research and the organization of a sales market, intermediary activities and other types of work linked into a single process and aimed at creating or improving products, expanding the range of goods and services.

Currently, the forest complex is undergoing a number of systemic changes related to the reorganization and institutional changes in the forest management structure as a whole. These changes were also affected by organizations directly involved in research activities in the forestry sector, while the connection between the state and private business in this area was largely lost due to the loss of demand for any developments.

At the same time, a long-term program for the development of the forest sector provides for the creation of innovative technologies and products in the following areas:

- Forest inventory, state forest inventory and forest pathological monitoring;
- forestry and forest management;
- forestry and forest crops in terms of obtaining fast-growing and highly productive forest species with predetermined economic properties based on biotechnologies, methods of forest genetics and breeding;
- use of forest resources in bioenergy, etc.

As we know that green plants hold 72% of the sky dust. During the summer months, one hectare of forest produces 220-275 kg of carbon dioxide and 180-215 kg of oxygen per day. This amount is enough to provide oxygen to 430-500 people for ten hours. Four trees can meet one person's oxygen needs overnight. Indeed, the forest is the most valuable natural resource for man, and his gifts to man are priceless. In particular, forests provide a variety of useful animals and birds, wild fruits and fungi, valuable fur, disease-bearing herbs, and contribute to the maintenance of water purity and fresh air, while balancing air and soil temperatures. Protects fields from dry, hot winds, prevents soil degradation and performs environmental, sanitary, hygienic, health and aesthetic tasks. The territory of the Andizhan state forestry is located in the Fergana valley of the Pamir-Tyanshan mountain system with a subtropical climate. The climate of the Fergana Valley is characterized by the summer heat, low amount of precipitation and high evaporation. During the short spring months, it takes its place on the long and hot summer days and lasts until mid-autumn. Winter weather is variable. Winter rainfall, ie snow cover is thick in the area of the farm. Mainly strong winds are observed in April-June. The flora growth rate is 217 days, and it increases the farm's ability to select crops for the establishment of cultural forests. The warming of spring days will allow planting in March and in some years in the second half of February. Climate variability is also likely to adversely affect the growth and development of the flora. The state forestry of the Andizhan area is not cut down for the main purposes, because it is a valuable forest and fruit forest category, acting as a protection against water and wind erosion. Unauthorized hunting and feeding of animals in forest divisions are prohibited. Therefore, it is not accidental

for adults to say that the forest is one of the seven treasures. In recent years, the Andijan State Forestry Team has been actively involved in the construction and landscaping work in Andijan. There is a great deal of hard work of the foresters in improving the urban ecology in the planting and cultivation of trees suitable for the urban climate. On this basis, the Andizhan State Forestry has been allocated unused mountain and hilly land for cultivation of cultural walnut fruit (walnut, pistachio, unabi) trees from the hill and mountain regions. The total area of the Andijan State Forestry so far this year was 2,029 hectares and consisted of 17 forest plots, and today there are 24 forest plots with a total area of 8,573 hectares.

Andizhan State Forestry is planning to plant pistachio on 1000 hectares in 2018-2019, walnut on 200 hectares, as of December 1 of this year planted sunflower seeds on 1060 hectares and 200 hectares with walnut trees. Besides, cultivation of handmade pistachio on mountain and hilly areas in Asaka and Marhamat districts has been started. In particular, a greenhouse for 21 acres was built in the area of the Toshohur forest department in Kurgantepa district. Total economic income for the past two years has been estimated at $ 436 million. In 2018, gross profit reached 6 billion 700 million Soum, of which the proceeds amounted to 5 billion. 43 million soums. This is an increase of 16 times compared to 2016. Particular attention is paid to planting on the farm, 42 hectares are specialized in the cultivation of ornamental trees. These days, there are 29,000 pine trees, 10,000 pomegranate pine trees, 30,000 Indian cedar seedlings, 20,000 Syrian roses, 5,000 blueberry, 5,600 pieces of silk, 10,125 Japanese noodles. 8 thousand 364 catalpa seedlings are being cultivated. In addition, he has been working with the hard work of forestry specialists in the care of many species of ornamental seedlings and flowers. Andijan State Forestry Unitary Enterprise "Uzulkulokam" to the Andijan regional organization 4 345 Japanese rides, 2 806 pine trees, 2,400 pomegranates, 963 pistachio, 380 pine trees, 280 tulips, 755 catalpa, 2776 Delivery of chestnuts, 7800 units of Syrian roses, 350 pieces of silk acacia, 398 pavilions, totaling 23,253 units (1 billion 42 million soums). At the same time, in the autumn of 2018, we have 1,300 kg of nuts, 1,090 kg of pistachios, 670 kg of biscuits, 650 kg of ducks, 400 kg chestnuts, 115 kg of birch, 75 kg mulberry, 150 kg of sweet almonds, 60 kg of sweet almonds, 15 kg. kg glycchia, 100 kg maple, 70 kg jelly, 5.5 kg berry, 10 kg sumax, 30 kg jasmine, 1 kg of Crimean pine, 2 kg of maple pine, 6 kg pecan (american), 4 kg camel, 2 kg of beetroot, 4 kg of Indian citrus, 4 kg of Syrian roses, 0.5 kg of magnesium ornamental seeds were collected and effectively used in the newly created lemon-grown greenhouses. mon row of seedlings of ornamental plants seeds sowing has been carried out. In the autumn of this year, 100,000 pavilion seedlings were harvested and planted in the ready-made areas to produce large-scale plantations. In order to ensure the implementation of specific government decisions on the development of silk production in the country, the government allocated $ 1 million. More than 250,000 mulberry saplings are being prepared, of which 250,000 are ready for spring sowing.

Starting from the autumn of next year, the farm is working to meet the needs of the region for ornamental trees. Recently, along with the planned reforestation, replenishment and establishment of new forests, they are developing new directions based on market economy requirements. In particular, among the trees in the woods, there is a growing production of vegetables, melons, as well as raw materials for the pharmaceutical industry on farmland. The farm is actively working on the use of additional networks, supply of high quality agricultural products, medicinal and fodder plants and consumer goods for the population, increasing income, strengthening the logistics of forestry. To date, the farm needed heavy equipment to relocate, level, plow, restore, increase productivity and ensure timely fulfillment of the tasks given by the age of the forest, which has not been economically viable. To this end, a leasing agreement was signed with Andijan Regional Branch of JSC "Uzagrolizing" of Andijan State Forestry on July 3, 2017, No. 365, 366, 367 and 368 for purchasing agricultural machinery. To date, our farm has four Belarus-1523 tractors, 4 PON 3 + 1 rotary humps, 2 24-disc barrels, 2 PLANTER D4 pneumatic screws, 1 VM-24 seeding machine, 1 GS. 2,600 fertilizer units and one unit of the OSh-600 type were delivered. These equipment has been handed over to the forest plots, and currently the work is being done to clear and empty the land. Our farm produces 1.2 mln. grains are grown and in autumn 2018 the contours will be shipped to the coast around $ 1 million. more than 138 hectares of seedlings were planted. These medicinal plants are being exported not only internally but also abroad. From these medicinal plants 15 tons of rosemary, 2,500 kg of chamomile, 300 kg of nails, 736 kg of peppermint, 140 kg of cloves, 680 kg of lion. In order to effectively use forestry lands, more than 200,000 poplar trees were planted in the border areas, growing at a rate of one every five meters. At the same time, fast growing poplar varieties were planted on 28 hectares for the paper industry. In 2018, 78 tons of peas, 45 tons of beans, 33 tons of sunflower, 24 tons of rice and more than 3 tons of dried pepper were harvested and stored in the warehouses in 2018.

Conclusions

The region has accumulated 50,000 units of natural presses for livestock. In order to promote eco-tourism, the Tashohur forest department, located in Kurgantepa district, carried out large-scale landscaping and planted 4,000 eastern camel trees and over 4,000 zebra pines. In addition, the construction

of a 5.8 km highway with a length of 6 meters is being completed. In the future, work is underway to set up bathing and recreation areas on these lands. In order to fulfill the tasks set by the Cabinet of Ministers of the Republic of Uzbekistan dated September 18-21, 772-F, our farm has planted 32,500 ornamental and fruit trees for planting in autumn 2018 with public education, preschool education and healthcare. were delivered free of charge to health facilities [4].

In conclusion, the government of Andijan State Forestry is fulfilling the tasks and tasks set by the government to widely use the potential of forestry, further develop the production, processing and processing of medicinal plants, and strengthen the material and technical base of forestry.

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SURFACES QUALITY OF PLASTIC GEARS MADE BY 3D PRINTING

Abstract: *Description of the experiment for manufacturing of plastic gears by 3D printing was given in the article. Comparison of surfaces quality of the plastic gears when changing of the print speed, the layer height and other 3D printing parameters was performed.*

Key words: *a 3D printer, quality, 3D printing, a gear, temperature.*
Language: *English*
Citation: Chemezov, D., et al. (2019). Surfaces quality of plastic gears made by 3D printing. *ISJ Theoretical & Applied Science, 10 (78),* 522-529.
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Scopus ASCC: *2209.*

Introduction

Development of the engineering industry has led to creation of 3D printers. A part of any configuration can be gradually manufactured without using of special devices on the 3D printer. This is especially true in the conditions of the experimental production. The materials range for 3D printing varies from gypsum to metal powders. Dimensions of the 3D

printer table and ability of the parts manufacturing only from one type of materials on the specific model of the 3D printer are limitations for 3D printing.

Plastic is one of main materials for 3D printing. The various machine parts are made of plastic in mechanical engineering, including the gears for slow speed transmissions. Precision casting and machining (effective in the mass production) are the other methods of the gears manufacturing. The fitment bore and the tooth profile are the most accurate elements of the gear. Let us consider the contact surfaces quality of the gears after 3D printing.

Materials and methods

Comparison of the surfaces quality of the plastic gears made on the 3D printer in the conditions of changing of the printing modes was carried out.

Manufacturing of the parts was carried out on the 3D printer WANHAO Duplicator i3 v. 2.1. The general views of the 3D printer and the control box are presented in the Fig. 1. The technical specifications of the 3D printer are presented in the table 1.

A ***B***

Figure 1 – The views of the 3D printer (*A*) and the control box (*B*).

Table 1. The technical specifications of the 3D printer.

Printing	
Print technology	Fused filament fabrication (FFF)
Build volume	200×200×180 mm
Layer resolution	0.1 – 0.4 mm
Positioning accuracy	X 0.012 mm
	Y 0.012 mm
	Z 0.004 mm
Extruder quantity	Single extruder
Nozzle diameter	0.4 mm
Print speed	10 mm/s – 70 mm/s
Travel speed	10 mm/s – 70 mm/s
Supported print materials	WANHAO branded PLA, ABS, PVA, HIPS, wood, flex, conductive
Temperature	
Ambient operating temperature	15°C – 30°C
Operational extruder temperature	170°C – 240°C
Operational print bed temperature	30°C – 70°C
Software	
Slicer software	Cura WANHAO edition 15.04
Cura input formats	.STL, .OBJ, .DAE, .AMF

Cura output format	.GCODE
Connectivity	Micro SD card, USB port (expert users only)
Electrical	
Input rating	100-240 V AC, 50/60 Hz, 3.5 A
Physical dimensions	
Printer frame dimensions	400×410×400 mm
Weight	10 kg

On the first stage, the three-dimensional solid model of the part "Gear" was built. The finished model of the gear was imported into the Cura special computer program for 3D printing (the Fig. 2). The printing modes of the part were set (the table 2) and created the control program (the table 3) in the Cura.

The gear model had the following dimensions: the number of the teeth – 17 pieces, circumference of the teeth tops – 33.6 mm, circumference of the teeth cavities – 27.3 mm, the diameter of the fitment bore – 15.5 mm, the width of the groove – 5 mm, the depth of the groove – 2.3 mm, the gear width – 15 mm.

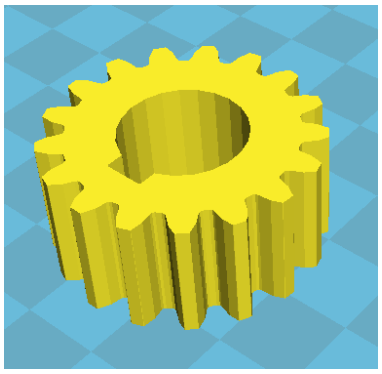


Figure 2 – The imported gear model into the Cura program.

The parts were made of polylactide (PLA). PLA has the following properties: the melting point – 173…178°C, the softening temperature – 50°C, the Rockwell hardness – 70…90, tensile strain – 3.8%, bending strength – 55.3 MPa, tensile strength – 57.8 MPa, the modulus of elongation – 3.3 GPa, the Young's modulus in bend – 2.3 GPa, the glass-transition temperature – 60…65°C, density – 1.23…1.25 g/cm³, printing accuracy – ±0.1%, shrinkage when the part manufacturing – no, moisture absorption – 0.5…50%.

The parts manufacturing was carried out on two modes. Manufacturing time of the part was 62 minutes, the required wire length was 1.99 m, and the part weight was 6 g on the first mode. Manufacturing time of the part was 170 minutes, the required wire length was 1.74 m, and the part weight was 5 g on the second mode.

Table 2. The modes of 3D printing.

Parameter	**1 mode**	**2 mode**
Quality		
Layer height, mm	0.2	0.1
Shell thickness, mm	0.8	
Enable retraction	yes	
Fill		
Bottom/top thickness, mm	0.6	
Fill density, %	20	
Speed and temperature		
Print speed, mm/s	60	30
Printing temperature, °C	210	

Bed temperature, °C	50	
Support		
Support type	Touching build plate	
Platform adhesion type	Raft	No
Filament		
Diameter, mm	1.75	
Flow, %	100.0	
Machine		
Nozzle size, mm	0.4	
Retraction		
Speed, mm/s	40.0	
Distance, mm	4.5	
Quality		
Initial layer thickness, mm	0.2	
Initial layer line width, %	100	
Cut off object bottom, mm	0.0	
Dual extrusion overlap, mm	0.15	
Speed		
Travel speed, mm/s	80.0	40.0
Bottom layer speed, mm/s	8	
Infill speed, mm/s	50	25
Top/bottom speed, mm/s	15	7.5
Outer shell speed, mm/s	15	7.5
Inner shell speed, mm/s	30	15
Cool		
Minimal layer time, s	5	
Enable cooling fan	yes	

Layer height.

The thickness of the each printed layer is known as the layer height. The smaller layer height, the smoother curves will appear. The larger layer heights are better for bridging and overhangs. The smaller layer heights will also increase print time, as it will take the more layers to complete an object.

Shell thickness.

This defines the number of vertical walls that comprise the outside of this model. The WANHAO 3D printer is equipped with the 0.4 mm nozzle.

Enable retraction.

Retraction tells this printer to pull filament out of the extruder upon travel moves. Travel moves are when this print head moves from one area of print, to another without laying down filament.

Bottom/top thickness.

Also known as the surface layers; this will determine how thick the top and bottom layers are. The larger number here will create a thicker top and bottom, which can be helpful for strength, bridging, and quality purposes. Eg: If using the layer height of 0.2 mm, set the thickness to 0.4, 0.6 or 0.8 mm.

Fill density.

This number is expressed as percentage. 0% will give completely hollow print, while 100% will give the completely solid object.

Print speed.

This overall printing speed can be adjusted here. If no the other speeds are determined in the later sections this printer will automatically default to this speed. This speed will be different.

Printing bed temperature.

Any temperatures specified here will be used to automatically set both the extruder and the heated print bed. This print will not begin until these temperatures are met.

Support type.

The some models will require the support material in order to print properly. This will usually occur when the object has the angle in relation to the heated print bed between 0 to 45 degrees. It is highly

recommended to orient the object so that it minimizes or eliminates a need for the support.

Touching build plate. This causes support material to build up between the heated print bed and the object.

Everywhere. This prints support material between the heated print bed and the object as well as between the object and itself.

Platform adhesion type.

The some models have the small surface area contacting the plate. This can create adhesion issues causing this part to pop off at the some point during print. To fix this, use either «Brim» or «Raft». The raft is better used when the model has the small contact points with the heated print bed and overhangs.

Diameter.

The filament diameter setting is one of the more important settings. While this filament may be referred to as 1.75 mm, it is more likely going to be near 1.7 mm +/- 0.1 mm.

Flow.

This controls how much filament this printer is extruding in relation to the speed. This setting is mainly used to adjust for filament density variations. Leave this value at 100% as changing it can lead to the surface quality issues.

Nozzle size.

This defines the nozzle size. The slicing engine uses this value combined with the other settings to determine how quickly to feed filament into this extruder. The WANHAO 3D printer uses the 0.4 mm nozzle.

Speed.

The retraction speed determines the speed at which this filament is reversed out of the extruder for travel moves and when changing direction during printing.

Distance.

Retraction distance determines how much filament is pulled out of this extruder on travel moves and when changing direction. Higher thermal retaining filaments such as PLA behave better with longer retraction distance. Anywhere from 1 mm to 3 mm is the good starting range.

Initial layer thickness.

This will control how thick this first printed layer height is printed onto the heated print bed. Having the larger initial layer height will help prevent this part from popping of the plate. The WANHAO 3D printer auto leveling system could be affected.

Initial layer line width.

This will control how wide this first extruded filament path is for the initial layer. The wider line width will help with the bed adhesion. For the models with moving printed in the place parts, the smaller initial layer line width is recommended.

Dual extrusion overlap.

This will determine how far these dual extruders will overlap when laying down material. This will help adhesion between two different colours or the types of filament. This setting is not applicable to the WANHAO 3D printer; it is only for the printers with the dual extruders.

Travel speed.

This setting will determine how fast this print head moves while not extruding filament. The normal travel speed of 125 – 150 mm/s is recommended.

Bottom layer speed.

This will control of the initial layer speed. In general, the slower initial layer speed will help with the first layer adhesion.

Infill speed.

This is how fast this print head speed will be while laying down the interior portion of this model. The faster speeds are usually tolerable here, as none of infill will be visible from the outside of this object.

Outer shell speed.

This will be the outermost surface of the model. This is the most important setting, as it controls the speed of this print head on the visible layers.

Inner shell speed.

This affects vertical walls that are in between the outer shell and infill. This will not be visible but will help support the outer shell and infill.

Minimal layer time.

This will determine a minimum amount of time this printer will spend laying down the each layer. If this layer print time falls below this printer will automatically slow down to reach this time before moving onto the next layer. Tweaking this can help get cleaner, crisper prints.

Enable cooling fan.

The enables operation of this extruder is active cooling fan.

Table 3. The fragment of the control program for printing of the gear on the 3D printer.

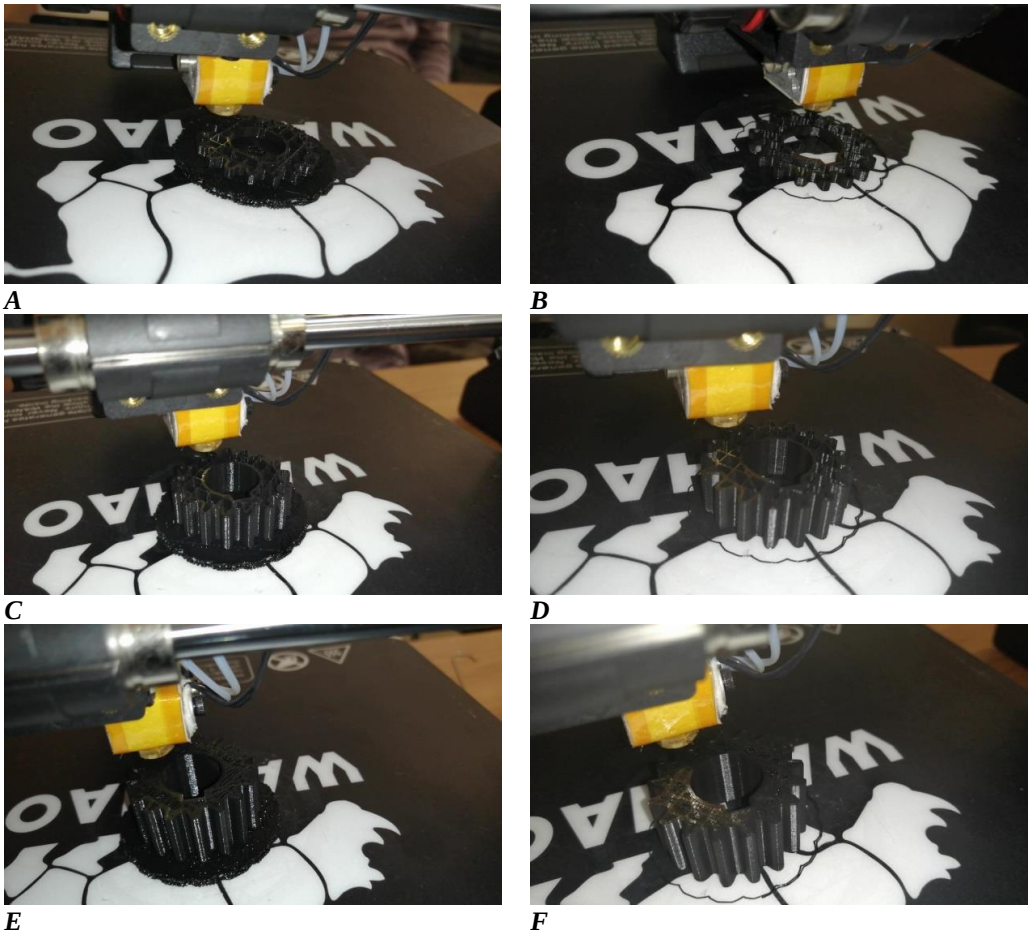
```
M190 S50.000000
M109 S210.000000
;Sliced at: Wed 02-10-2019 09:14:34
;Basic settings: Layer height: 0.2 Walls: 0.8 Fill: 20
;Print time: 1 hour 6 minutes
;Filament used: 2.293m 6.0g
;Filament cost: None
;M190 S50 ;Uncomment to add your own bed temperature line
;M109 S210 ;Uncomment to add your own temperature line
```

```
G21 ;metric values
G90 ;absolute positioning
M82 ;set extruder to absolute mode
M107 ;start with the fan off
G28 X0 Y0 ;move X/Y to min endstops
G28 Z0 ;move Z to min endstops
G1 Z15.0 F4800 ;move the platform down 15mm
G92 E0 ;zero the extruded length
G1 F140 E30 ;extrude 3mm of feed stock
G1 X20 Y0 F140 E30
G92 E0 ;zero the extruded length again
G1 F4800
;Put printing message on LCD screen
M117 Printing...
;Layer count: 75
;LAYER:-2
;RAFT
G0 F4800 X84.009 Y85.080 Z0.400
;TYPE:SUPPORT
G1 F480 X85.835 Y84.272 E0.49810
G1 X86.528 Y82.628 E0.94314
G1 X89.065 Y81.057 E1.68751
G1 X90.177 Y80.315 E2.02098
G1 X92.433 Y80.214 E2.58431
G1 X93.788 Y78.909 E3.05359
G1 X96.688 Y78.367 E3.78952
……..
G0 F4800 X111.471 Y90.257
G1 F900 X112.587 Y91.374 E2293.71445
G0 F4800 X112.779 Y91.001
G1 F900 X111.868 Y90.089 E2293.75732
G0 F4800 X112.349 Y90.004
G1 F900 X112.972 Y90.627 E2293.78663
M107
G1 F2400 E2289.28663
G0 F4800 X112.972 Y90.627 Z20.000
;End GCode
M104 S0 ;extruder heater off
M140 S0 ;heated bed heater off (if you have it)
G91 ;relative positioning
G1 E-1 F300 ;retract the filament a bit before lifting the nozzle, to release some of the pressure
G1 Z+5 E-5 X-20 Y-20 F4800 ;move Z up a bit and retract filament even more
G28 X0 Y0
G90
M84 ;steppers off
G90 ;absolute positioning
```

Results and discussion

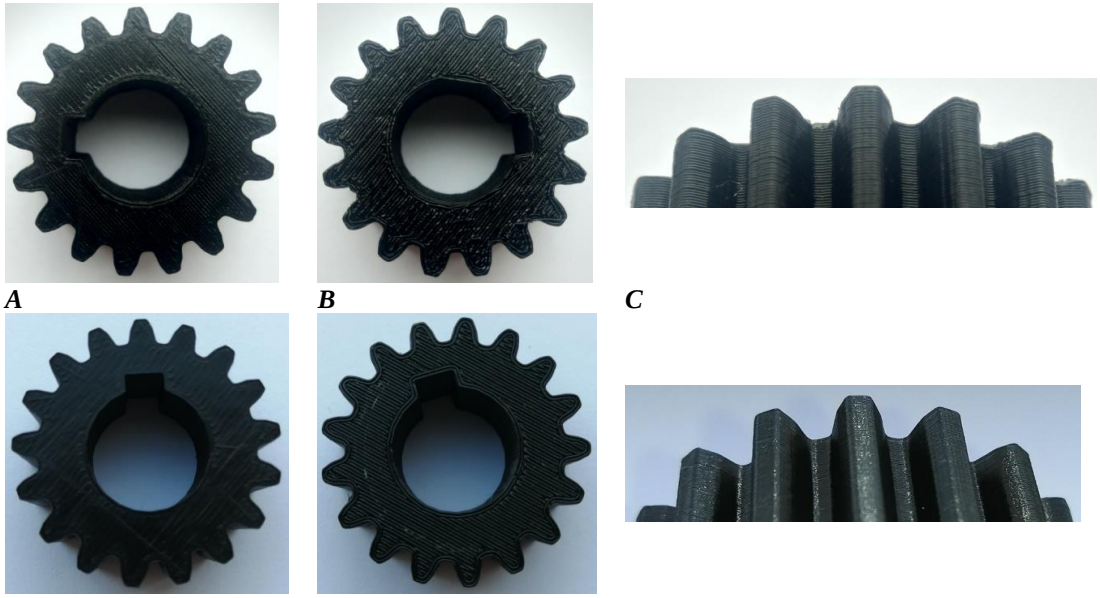
The 3D printing processes of the gears on the first and second modes are presented in the Fig. 3. Filling of the parts was carried out in the form of stiffeners distributed in the grid variant on all volume. This filling of the gear volume will be sufficient when small loads. Accuracy of 3D printing was ensured by the careful setting of the gap of 0.1 mm between the table surface and the nozzle of the 3D printer extruder.

The manufactured surfaces of the plastic gears are presented in the Fig. 4. The manufactured gear on the first mode is noted by the rough flat surfaces. The some volumes of plastic extending beyond the contour of the part are observed after separation of the raft from the surface of the gear. The layers of plastic in some places were not applied on the contour of the part. The gear teeth have the correct shape (according to the model), but the surfaces roughness is high. The manufactured gear on the second mode is noted by the denser flat surfaces. The surfaces are smooth, without plastic residues. The gear teeth have the correct shape, the surfaces roughness is low. The fitment bores of the gears have the imperfect circle shape, lobing is observed.



A ***B*** ***C*** ***D*** ***E*** ***F***

Figure 3 – 3D printing of the gears: *A* and *B* – 20% on the first and second modes, respectively; *C* and *D* – 65% on the first and second modes, respectively; *E* and *F* – 96% on the first and second modes, respectively.



A ***B*** ***C*** ***D*** ***E*** ***F***

Figure 4 – The surfaces quality of the gears after 3D printing: *A*, *B* and *C* – the top, the bottom and the teeth when manufacturing on the first mode, respectively; *D*, *E* and *F* – the top, the bottom and the teeth when manufacturing on the second mode, respectively.

Conclusion

The low speed of 3D printing contributes to the denser surface of the part. The surfaces quality of the gears along the *Z* coordinate axis is higher than along the *X* and *Y* coordinate axes. The computer model must be built in the special programs with high accuracy of drawing of the geometric shapes for elimination of lobing of the fitment bores of the gears. For comparison, this model of the gear was built in the KOMPAS-3D software environment.

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FOREIGN EXPERIENCE OF REGULATION OF UNCERTAIN POPULATION EMPLOYMENT

Abstract: *The article considers the scientific and theoretical aspects of foreign experience in regulating precarious employment. The author summarizes and summarizes the results of a sociological study conducted by the author for reasons of employment of the able-bodied population based on unstable employment. Also in developed foreign countries, tax incentives for employees are systematically studied and the conclusion of the article is generalized.*

Key words: *volatility, employment, employed population, quality of life, incomes of the population, informal employment, precarious work, precarious employment, precarization of employment.*

Language: *English*

Citation: Nabiev, O. A. (2019). Foreign experience of regulation of uncertain population employment. *ISJ Theoretical & Applied Science, 10 (78),* 530-535.

Soi: http://s-o-i.org/1.1/TAS-10-78-95 ***Doi***: https://dx.doi.org/10.15863/TAS.2019.10.78.95

Scopus ASCC: *2000.*

Introduction

JEL: L43; L94; G18

The Strategy of Action on the five priority directions of development of the Republic of Uzbekistan in 2017-2021 sets specific objectives to improve the efficiency of public employment, create favorable conditions for employment of citizens, stimulate the activity of business entities that create new jobs. . In recent years, as a result of an active investment policy, the creation of new enterprises, increased production capacity, the expansion of the service sector, the creation of stable and productive workplaces, the state support and stimulation of entrepreneurship has been increasing. However, the problem of stable employment in the country is still not fully resolved.

According to the official data released by the end of 2017, the number of unemployed people in the world was 192.7 million. people, which is 2.6 million more than a year ago. the number of This means that 5.6% of the world's population is unemployed [2].

The unemployment rate in Uzbekistan in 2018 was 9.3% of the economically active population as a result of a new methodology [3]. According to the World Bank and the International Labor Organization (ILO), the unemployment rate in Uzbekistan was 7.2% in 2017, and the country ranked 113th out of 185 countries [4].

Literature review

A. Smith, J.B. Say, A. Marshall, J.M. Keynes, D. Ricardo, M. Friedman, On the labor market and its functioning, employment of the population, classical, new classical, institutional and monetary theory of unemployment. Founded by A. Pigu et al. Unstable employment - theoretical and methodological foundations of precarcation of foreign researchers R. Castel, G. Stending, P. Burde, R.-D. Hepp, M. Richeri, R.P. Coleman, B.Lugarten, A. Collberg and designed by others.

Scientists of the Commonwealth of Independent States (V.N.Bobkov, O.V.Veredyuk, S.A. Drujilov, E.A.Cherherkh, J.T.Tashchenko, Yu.G. Odegov) analyzed the problems of unstable employment. I.Golenkova, Yu.V. Goliusova, E.A. Grrishinina, N.V. Osipova, N.J. Alshanova and many others.

Regulatory framework is generally composed of regulations enforced by governmental institutions. Industry and other affected stakeholders may

complement these governmental regulations by self-regulatory coordination (e.g. OECD, 1997). Their efforts can result in voluntary commitments and standards released by publicly accredited or even administrated standardization bodies. As formal standards and regulations shape the paths of further technological developments [1] , it is highly important to understand their influence and functionality in order to increase economic growth and welfare.

Socio-labor relations in Uzbekistan in the conditions of market economy - formation and development of the labor market, issues of employment, unemployment, job creation in scientific works of K.Abdurahmonov, D.Rahimova, N.Zakirova, B.Umurzakov, Z.Hudoyberdiev and others. found.

At the same time, the problems of unstable employment in the economy of Uzbekistan, its impact on economic development and the incomes of the population, the problems of such labor activity that are contrary to the ILO's concept of decent work have not been studied in depth.

Analysis and results

According to the International Labor Organization, standard labor relations are becoming more and less clear about the real situation in the labor market: only a quarter of hired workers are currently covered by them. Unstable employment is widespread in developed countries. According to the International Labor Organization (ILO), there are about $ 2 billion in the world today. people (61.0% of the working population) are unemployed. Currently only 48.0% of women are employed. The youth unemployment rate was 20.0% (Figure 2.5).

A sociological survey on the reasons for the employment of the working population on the basis of unstable employment, including 80.0% of respondents in the United States - hope to have a permanent job; 50.0% stated that it is acceptable to combine work and personal life. This means that their employment does not contradict their labor rights.

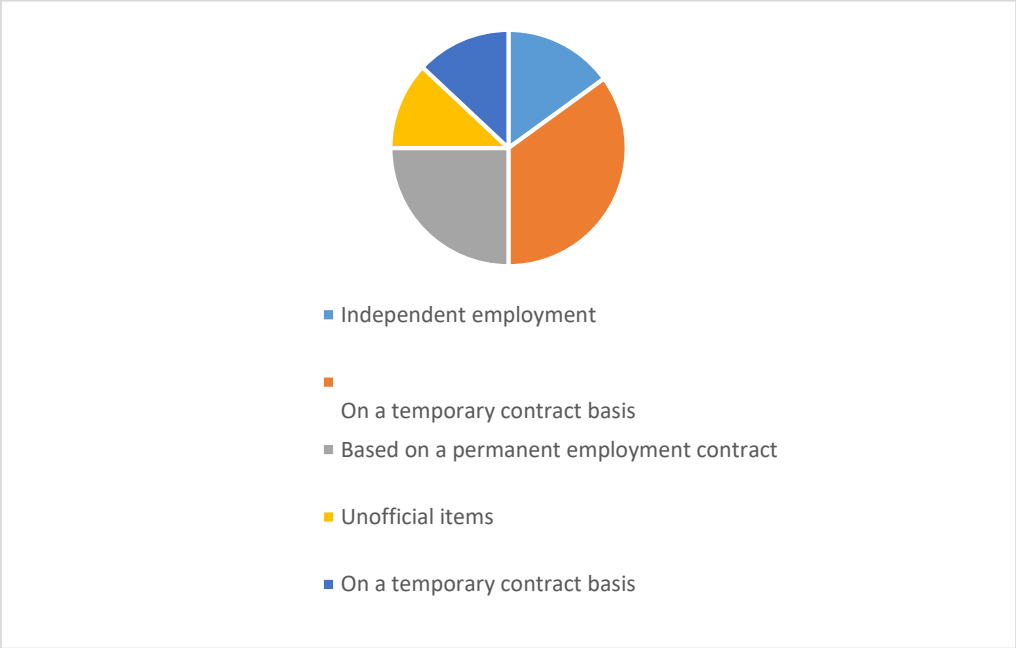

Figure 1. Employment in the world (% of total employment) [5]

However, the International Labor Organization's report "Non-standard employment in the world: keeping in mind the challenges and prospects" [6] includes non-standard forms of employment (NSFE), including temporary, partial employment, temporary borrowing. Concerns are being raised about the scope of labor, the subcontractor, the hidden labor relationship.

The report warns that non-standard workplaces provide employees with access to the labor market, but with a certain degree of flexibility between employers and employees, as well as depriving labor resources of workplace guarantees. At the same time, the difference between the salaries of permanent and temporary employees is 30%.

Switzerland's Adecco employs 700,000 temporary workers, and Japan's Pasona agency provides 250,000 people with short-term contracts every day [7].

In industrialized countries, employment under the terms of “extremely short work hours” or “call-to-work”, including “zero-employment contracts” (with no minimum working hours guaranteed), is taking place in developing countries. In the UK, for example,

2.5% of employees work on "zero-employment contracts", 10.0% of those employed in the United States are on call or unstable schedules.

In the EU countries, temporary employment increased from 8.0% to 14.0% of all employed in the period 1984 to 2015, and from 12.0% to 17.0% on part-time work.

Currently, education and social work in Austria, Denmark, Finland, Germany, Luxembourg, Austria, Denmark, Finland, Germany, Luxembourg, Greece, Portugal, Italy, France, Spain, Latvia, Switzerland, Belgium, Spain, Estonia and In Ireland, unsustainable employment in the construction industry prevails over formal employment.

Unsustainable employment has become commonplace even in Japan, where the lifelong employment of a company has become a tradition. In this country, one-third of the total number of employed people are currently working in temporary employment [8].

At the same time, the informal sector has some important social and economic functions. First, it allows those who are unable to find work in the formal sector to work even if they are unstable. In this way, it promotes income for socially unprotected groups. Secondly, the informal sector is often the first step for those who want to start their own business.

However, the social problems of unstable employment - loss of tax revenue, declining labor productivity and loss of social security far outweigh those opportunities. Therefore, one of the important tasks in the socio-economic policy of the state is the regulation of unstable employment.

State regulation of unstable employment in the European Union is based on four basic principles:

1. Preventive measures. They include simplifying procedures for entrepreneurs to set up their own businesses, reducing costs and removing barriers to formal declaration of their activities.

2. Penalties. It is intended to strengthen control functions and to impose penalties on those who benefit from covert (secret) labor activities. Measures will also be taken to protect those who have been fired in cooperation with the relevant tax and law enforcement agencies and labor inspections.

3. Cooperation between the EU Member States in the area of transnational economic activity in the area of social insurance and informal employment fraud.

4. Carrying out public awareness campaigns on social insurance, as well as the solidarity of workers and adverse effects on justice in the workplace.

Labor legislation plays a key role in securing basic labor rights - the procedures for hiring and dismissing employees, setting minimum wage, creating employment opportunities, approving employment programs, and protecting the unemployed. In particular, political reforms in the labor market will facilitate the refusal of employees to work in the informal sector, and employment programs will help prepare workers for the formal sector.

According to the Union of Industrial Enterprises of the European Union (UNICE), the main problem in regulating labor legislation in EU member states is to achieve proportionality - on the one hand, the flexibility of legal norms, and on the other, social protection of employees. The priority here is to create sufficient jobs in the community. But this can only be achieved if the labor market is flexible. However, in these circumstances, the issue of social security of employees remains open.

For example, the German labor legislation places emphasis on occupational safety. General, social, technical and medical protection of labor are its components. It can be called a useful factor of employment registration.

In France, the change of labor legislation in 2016 caused serious discontent. These changes could extend the workweek to up to 45 hours with the approval of local unions while maintaining a 35-hour workweek, as well as reducing wages and easing staff layoffs.

In the EU member states, close cooperation between various government agencies - labor inspections, social security and tax authorities has been established to combat informal employment. The efficiency and transparency of the legal system have helped inform the authorities about informal employment, such as illegal dismissals.

In developed countries, tax policy is a key tool in the fight against informal employment. This is mainly done in two ways. The first is to reduce payroll taxes and social benefits and other taxes on businesses and / or employees. The second - direct fiscal measures - is to attract non-paying employees to fulfill their tax obligations by imposing a tax obligation on the employer.

Since the second half of the 1990s, a number of countries that have been developing market economies have implemented tax reform aimed at reducing the tax on labor resources, especially for low- and low-wage workers. Many of these countries have introduced tax incentives for certain categories of employees (Table 2.4).

In Belgium and France, for example, a lower tax rate for low-paid employees has encouraged them to model their business. In Slovakia, the progressive income tax was abolished and the single tax rate for individuals and legal entities at the rate of 19.0% helped formalize labor relations for those engaged in informal labor. This is aimed at building the capacity of responsible organizations and strengthening penalties for violations. At the same time, administrative measures include informing the public about the prospects for businesses and individuals, whether they choose the formal or informal sector.

Table 1. Employee tax incentives in foreign countries

Countries	Categories of employment	Tax concessions
Austria, France, Germany, Greece, Ireland, Netherlands, Spain, Turkey	Individuals	Determination of the highest rates of regression in the income tax system. However, in some cases they are applied to certain types of payments and retain their progressive nature, including income tax
Czech Republic, Greece and Portugal	Independent employment	Establishment of a lower rate for employees of enterprises on social payments
Hungary and Spain	Independent employment	Special simplified tax regime
A number of countries that are members of the Organization for Economic Cooperation and Development	For individuals	Complete exemption of dividend income from double taxation
France, Belgium and the Netherlands	Individuals engaged in unregistered labor activities	Tax concessions

Source: author`s ellaboration.

While the basic conditions governing the economic sector are determined by tax policy, business environment and labor market regulation, much depends on the institutions working in this area. For example, the effectiveness of health care and pension benefits dictates that these sectors are interested in doing their job in the formal sector with adequate social benefits. At the same time, the effectiveness of institutional law enforcement institutions helps to successfully combat informal economic activity.

Regulation of business covers such aspects as business registration, legal procedures, and business environment in general. This plays a crucial role in the selection of business entities, whether formal or informal. For example, the ease of registering and licensing businesses encourages the formal sector. At the same time, protection of the assets of the state by the state, fair resolution of emerging problems is also an incentive for the implementation of formal economic activity [9].

The world has accumulated positive experience on the implementation of labor activity in an unstable employment regime. For example, the Netherlands is a world leader in the performance of part-time employees. Nearly half of all employment (65.0% of women and 28.0% of men) are employed on a part-time basis. Most importantly, it is not limited to certain types of labor activities but is widely used in all sectors of the economy. Women are particularly pleased with this work.

In the Netherlands in 2000 a special law on working hours was passed. It provides guarantees to combine employment with the care of relatives. In particular, employees may, in certain circumstances, require the employer to reduce (prolong) their working hours. This requirement must be met except in cases when it would be detrimental to the interests of the employer [10].

Unstable employment in Uzbekistan - employment in the informal sector, formalization of informal employment of developed countries taking into account the size of illegal external labor migration It is advisable to take measures to increase the organization's creation.

Conclusion

The problem of unstable employment is at the center of the IOM experts' research. The International Labor Organization notes that the widespread use of unprotected forms of employment raises serious concerns in a situation where there are no positive results in improving the quality of jobs. In particular, in 2017, more than 42% of global employment, or 1.4 billion people, are precarious [10].

The European Institute for International Economic Relations (EURISPES) analyzes the problem of unstable employment in the labor market as a professional precociousness, economic precarcation and social decarcation and develops recommendations on labor market regulation in this regard. [11].

A study by the Prince's Trust (UK), including a three-month youth unemployment, shows that an additional 40 days of unemployment can be created.

The European Research Group of the Free University of Berlin (Freie Universität Berlin) in Germany conducts research on "Social Instability: Precariation and Inequality". The focus is on the problems of migration in Europe and the consequent expansion of unsustainable employment rates [12].

The research of the Russian Scientific Research Institute of the Ministry of Labor and Social Protection of the Russian Federation shows that there is a structural shift in employment in this country, that

formal employment forms are decreasing, and that non-standard forms of employment are becoming more widespread [13].

The problem of the level and quality of life of the laboratory of the Institute of Socio-Economic Problems of the Russian Academy of Sciences is investigating the consequences of unstable employment of forced migrants [14].

On the basis of the theme analysis of the unstable employment of the population in the labor market of Uzbekistan, the following conclusions were reached:

1. Demographic situation in Uzbekistan, 450-500,000 people entering the labor market annually, but the number of jobs created does not meet the labor market requirements in some regions of the country, leading to unemployment, illegal labor migration and informal employment.

In previous years, a significant number of jobs were created by economic entities with no legal status (trade, transportation, seasonal work, home-based work, other types of personal labor activity). At the same time, 36 of the 39 criteria for increasing employment and labor productivity in 39 sectors that make up the economy of Uzbekistan correspond to only 7 sectors - woodworking, glass and porcelain, building materials industry, housing and utilities, and public services. was They are not even light industry with a large labor force. Although this sector encourages employment in its own sector, it does not provide multiplier effect in other sectors.

2. Uncontrolled employment quota has a particularly strong impact on the needs of the national economy. For example, the ratio of job creation in industry to higher education professionals in these areas is 8: 1. There is a shortage of industrial managers, especially in the field of information and communication technologies, as well as production managers who have mastered modern management techniques. At the same time, the share of highly qualified specialists and researchers in the structure of employment is decreasing.

3. In order to regulate unstable employment, first of all, the method of informal employment in Uzbekistan needs to be improved. In accordance with the current legislation, individual entrepreneurs, members of dehkan farms, who pay state social insurance contributions, as well as individuals working in private farms, are employed in the formal sector. However, according to the recommendations of the International Labor Organization, they refer to the informal sector. Such imbalance with international standards reduces the number of people employed in the informal sector in the country and does not provide a comprehensive analysis of the real situation in the labor market.

4. The labor legislation of Uzbekistan does not contain the terms "temporary employees", "seasonal employees", "housewives", "remote employees", "borrowed" employees. Due to their lack of clarity, the legal status and guarantees of social protection of this category of employees are not specified. This calls for a radical renewal of labor legislation based on current practices.

5. The country has begun to use modern forms of unstable employment - outsourcing and franchising. This calls for the creation of a legal framework for these types of employment. In this regard, it is advisable to give the freelancers the status of individual entrepreneurs. This will allow them to further expand their activities:

- freelancers have the right to obtain consumer credit or credit for the development of their business, as they can prove their income;
- the problem of working abroad is eliminated as they can prove their right to work in those countries;
- Freelancers will be paid contributions to the pension fund and will be eligible for retirement benefits.

6. Unstable employment in Uzbekistan - employment in the informal sector, formalization of informal employment of developed countries taking into account the size of illegal external labor migration it is advisable to undertake measures to drastically increase job creation.

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ISI (Dubai, UAE)	= 0.829	РИНЦ (Russia)	= 0.126	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 8.716	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 5.667	OAJI (USA)	= 0.350

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CALCULATION OF THE ENERGIES OF NEGATIVE ION OF (B^{-1},C^{-1}AND N^{-1}) FOR GROUND AND EXCITED STATES

Abstract: *It this research calculate atomic properties are very important to describe the dynamics in atomic systems energies for 1s,2s shells all like negative ions for ground state (B^{-1}, $C^{-1}$and N^{-1}) and excited state (B^{-1}, $C^{-1}$and N^{-1}).*

In the research division is used technique for the analysis of the three-electron system, also all the examining atomic properties are normalized and the atomic units are used in the calculations and the results is obtained by using Mathcad 14 program.

Key words: *Hartree- Fock, atomic units, atomic properties, Hamiltonian operator.*

Language: *English*

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Introduction

The Schrödinger equation for atoms with more than one electron has not been solved analytically Approximate methods must be applied in order to obtain the wave functions or another physical attributes from quantum mechanical calculation[1].

The Hartree-Fock(HF) equations were first proposed by Fock in 1930.Since then, theHartree-Fock method has taken a central role in studies of atomic and molecular electronic structure The Hartree-Fock method(HF) is known to be successful in calculating properties of electron systems, in particular,the ground state properties of atoms. Based on a variational principle numerical and algebraic [2]. Numerical computational methods for atomic HF equations have been developed by Froese Fischer.The one-particle Green's function approach and related many-body methods have been extensively used to calculate ionization and electron attachment spectra of atoms and molecules [3].

2. Theory

The wave function

$$\Psi(r_1, r_2, r_3, \ldots . r_n) \qquad (1)$$

of any system is a mathematical expression which describes the system properties as position, momentum, energy, etc. In the uncorrelated wave function approximation, each particle is assumed to move in only the average field of all the other particles of the system. This kind uses approximation that called Hartree-Fock approximation (HF). In the correlated wave function approximation one can takes into account the correlation between all the particles of the system by using the configuration interaction approximation (CI). The wave function for the one–particle is defined as:

$$\Psi_{n\,\ell\,m_\ell\,m_s}(\,\overline{r}\,) = R_{n\ell}(r)Y_{\ell m_\ell}(\theta,\varphi)\sigma(s) \qquad (2)$$

the radial factor $R_{n\ell}(r)$ is related to the distance of electron from the nucleus and depends on the n (principal quantum number) and ℓ (angular momentum quantum number) while the angular factor (spherical harmonic) $Y_{\ell m_\ell}(\theta,\varphi)$ supplies an angle dependence and depends on the ℓ and m_ℓ (magnetic quantum number) [2].

The Hartree-Fock (HF) atomic wave functions are independent particle-model approximations to non-relativistic Schrödinger equation for stationary states. The single determinant can be written as the ant symmetrized product of all occupied HF spin-orbital for atoms [4] :

Can be expressed of Slater determinant as follows:

$$\Psi_{HF}(123\cdots N)=\frac{1}{\sqrt{N!}}\begin{vmatrix} \phi_1(1)\phi_1(2) & \ldots & \ldots & \phi_1(N) \\ \phi_2(1)\phi_2(2) & \ldots & \ldots & \phi_2(N) \\ .. \quad .. & & .. \quad .. & .. \\ .. \quad .. & & .. \quad .. & .. \\ \phi_N(1)\phi_N(2) & .. & .. & \phi_N(N) \end{vmatrix} \tag{3}$$

For any atom or ion, the Hartree-fock spatial orbital may be written as:

$$\boldsymbol{\phi} = \sum_{\mathbf{i=1}}^{\mathbf{j}} \mathbf{c_i \chi_i} \tag{4}$$

where c_i represents the constant coefficient yields from the SCF method and χ_i is the basis function as a standard normalized Slater-type orbital (STO's).

Many of the properties of an element depend on the energies of its electrons, that means in each moment, one can specify the energy of the an electron precisely, but not its location at a given instant. So in quantum mechanics when one wants determine the location one should talk about the probability of finding an electron in specific region from the space at given instant [5].

The one-electron radial density function $D(r_1)$ represents the probability density function of finding an electron at a distance between r_1 and $r_1 + dr_1$ from the coordinate origin defined as [6]:

$$D(r_1)=\int_0^\infty D(r_1,r_2)dr_2 \tag{5}$$

The radial electron-electron distribution function $f(r_{12})$, which describes the probability of locating two electrons separated by distance r_{12} from each other, was first introduced by Coulson and Neilson in their study of electron correlation for He (^{1}S) in the ground state [7,8].

The pair distribution function can be written as [9]:

$$f(r_{12}) = 8\pi^2 r_{12}\left[\int_0^{r_{12}} r_1 d\, r_1 \int_{r_1-r_{12}}^{r_1+r_{12}} \Gamma(r_1,r_2) r_2 dr_2 + \int_{r_{12}}^{\infty} r_1 dr_1 \int_{r_{12}-r_1}^{r_{12}+r_1} \Gamma(r_1,r_2) r_2 dr_2\right] \tag{6}$$

The one-electron expectation value $\langle r_1{}^n\rangle$ is determined by the expression [10]:

$$\langle r_1^n\rangle = \int_0^\infty D(r_1) r_1^n\, dr_1 \tag{7}$$

The inter-electron expectation values $\langle r_{12}^n\rangle$ is given by the relation [9]:

$$\langle r_{12}^n\rangle = \int_0^\infty f(r_{12}) r_{12}^n\, dr_{12} \tag{8}$$

The virial theorem is a necessary condition for any stationary state. From the theorem, one is led to [11]:

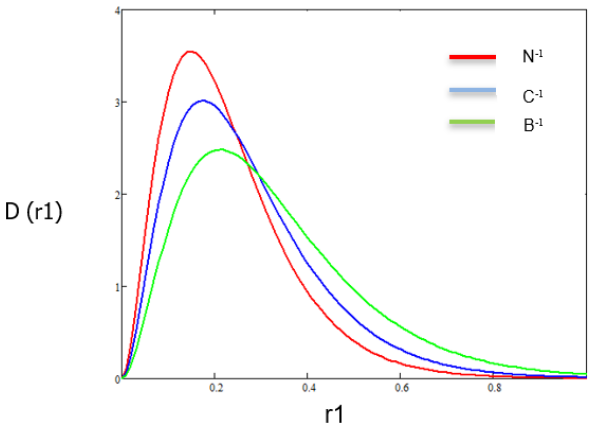
$$\langle E\rangle = \langle T\rangle + \langle V\rangle \tag{9}$$

$$\langle E\rangle = -\langle T\rangle = {}^{\langle V\rangle}/_2 \tag{10}$$

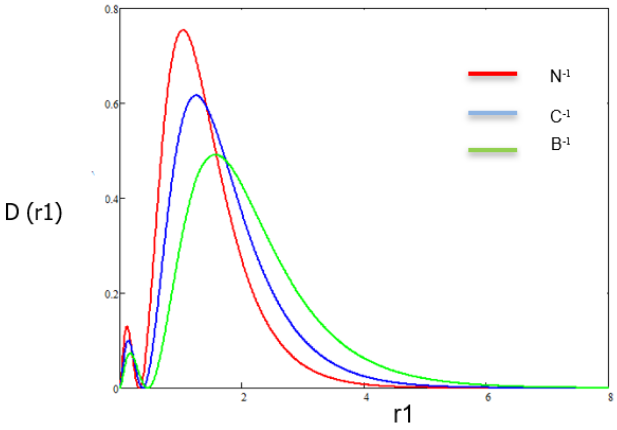
The expectation value of potential energy is proportional to the expectation values of $\langle r_1^{-1}\rangle$ and $\langle r_{12}^{-1}\rangle$ respectively, where [12]:

$$\langle V_{en}\rangle = -Z.\langle r_1^{-1}\rangle \tag{11}$$

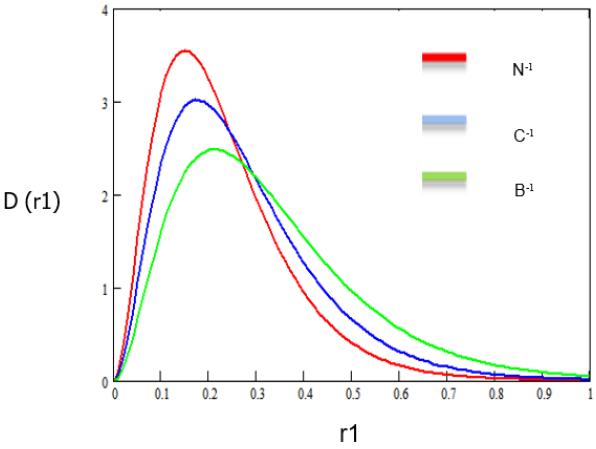
$$\langle V_{ee}\rangle = \langle r_{12}^{-1}\rangle \tag{12}$$



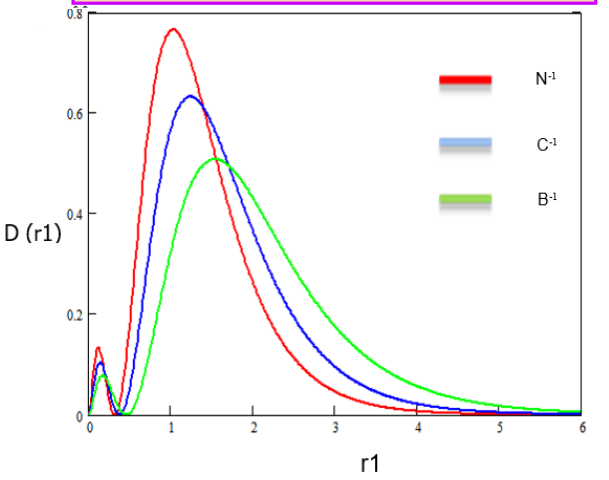
Fig(1): Relation between D(r_1) with the position(r_1) for (1s) shell of ground state for studied systems



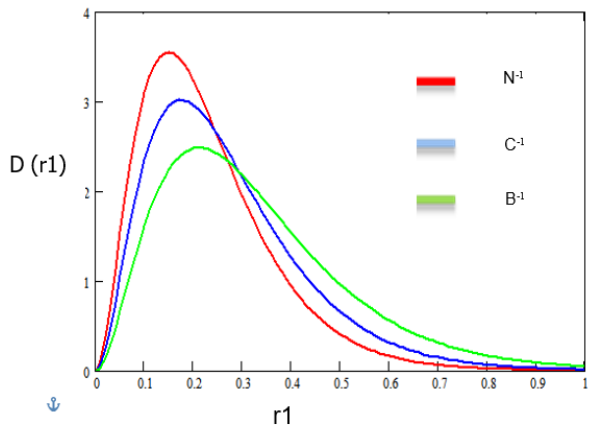
Fig(2): Relation between D(r_1) with the position(r_1) for (2s) shell of ground state for studied systems



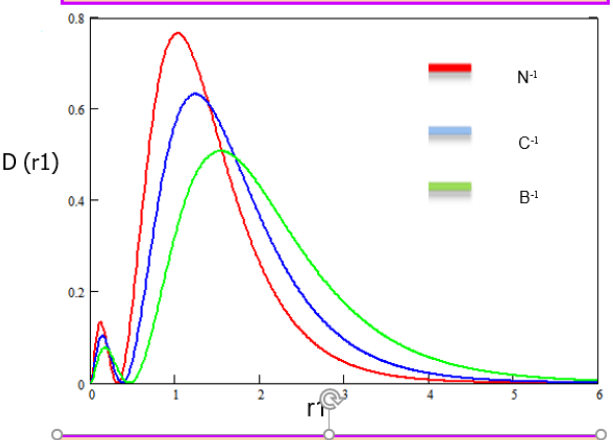
Fig(3): Relation between D(r_1) with the position(r_1) for (1s) shell of first excited state for studied systems



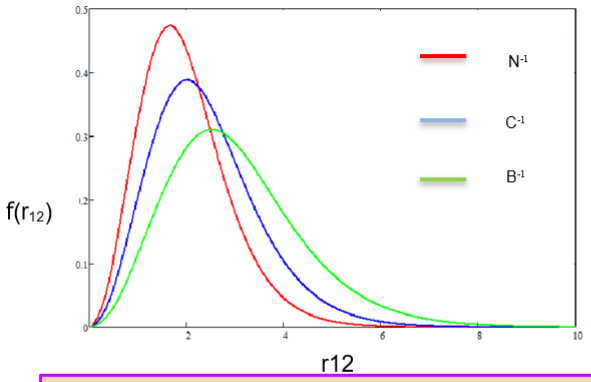
Fig(4): Relation between D(r_1) with the position(r_1) for (2s) shell of first excited state for studied systems



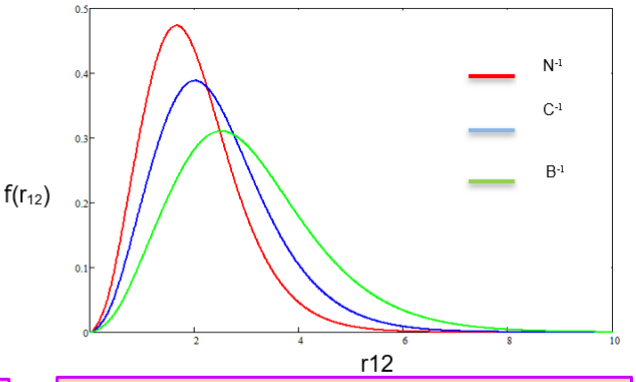
Fig(5): Relation between D(r_1) with the position(r_1) for (1s) shell of second excited state for studied systems



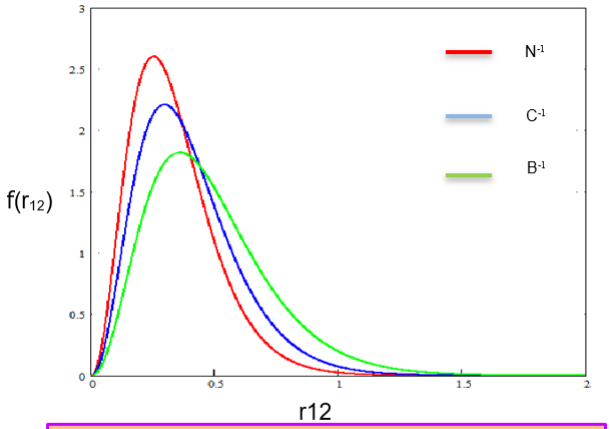
Fig(6): Relation between D(r_1) with the position(r_1) for (2s) shell of second excited state for studied systems



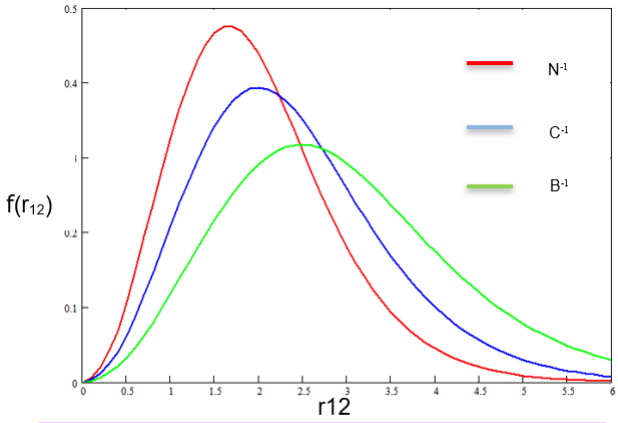
Fig(7): The relation between $f(r_{12})$ with corresponding position r_{12} for (1s) shell of ground state for studied systems.



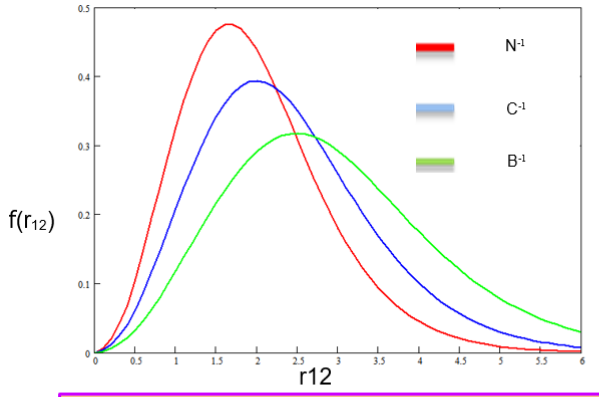
Fig(8): The relation between $f(r_{12})$ with corresponding position r_{12} for (2s) shell of ground state for studied systems.



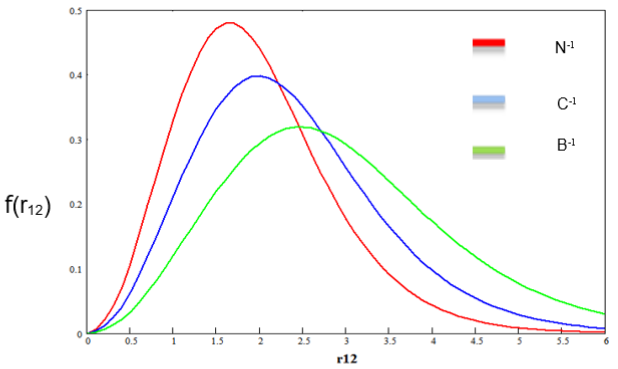
Fig(9): The relation between $f(r_{12})$ with corresponding position r_{12} for (1s) shell of first excited state for studied svstems.



Fig(10): The relation between $f(r_{12})$ with corresponding position r_{12} for (2s) shell of first excited state for studied svstems.



Fig(11): The relation between $f(r_{12})$ with corresponding position r_{12} for (1s) shell of second excited state for studied svstems.



Fig(12): The relation between $f(r_{12})$ with corresponding position r_{12} for (2s) shell of second excited state for studied systems.

Table (1): The one-particle expectation values $\langle r_1^n \rangle$ where $(n = -2.2)$ and standard deviation for studied systems of ground state.

B^{-1}	^3P	1s	44.5388	4.67400	1	0.32593	0.14344	**0.1929**
		2s	1.82916	0.67435	1	2.11829	5.53631	**1.02429**
C^{-1}	^4S	1s	65.2223	5.66396	1	0.26851	0.09727	**0.15866**
		2s	2.9671	0.85229	1	1.69124	3.52594	**0.81586**
N^{-1}	^3P	1s	89.8484	6.65343	1	0.22827	0.7025	**0.1347**
		2s	4.48174	1.04297	1	1.38969	2.3752	**0.66631**

Table (2): The one-particle expectation values $\langle r_1^n \rangle$ where $(n = -2..2)$ and standard deviation of studied systems for first excited state.

Ion	**State**	***shell***	$< r_1^{-2} >$	$< r_1^{-1} >$	$< r_1^0 >$	$< r_1^1 >$	$< r_1^2 >$	Δr_1
B^{-1}	^1D	1s	44.54565	4.6744	1	0.32585	0.14336	**0.19281**
		2s	1.89039	0.68626	1	2.07658	5.29654	**0.99215**
C^{-1}	^2D	1s	65.23456	5.66451	1	0.26845	0.09727	**0.15866**
		2s	3.0362	0.8623	1	1.6699	3.4285	**0.79995**
N^{-1}	^1D	1s	89.86221	6.65385	1	0.22827	0.07025	**0.13468**
		2s	4.52354	1.04789	1	1. 38291	2.35021	**0.66165**

Table (3): The one-particle expectation values $\langle r_1^n \rangle$ where $(n = -2..2)$ and standard deviation for studied systems of second excited state.

Ion	**State**	***shell***	$< r_1^{-2} >$	$< r_1^{-1} >$	$< r_1^0 >$	$< r_1^1 >$	$< r_1^2 >$	Δr_1
B^{-1}	^1S	1s	44.54733	4.67381	1	0.32583	0.14333	**0.19278**
		2s	1.92322	0.69137	1	2.06555	5.25012	**0.99178**
C^{-1}	^2P	1s	65.24335	5.66407	1	0.26841	0.09717	**0.15852**
		2s	3.07992	0.86889	1	1.65681	3.37466	**0.79349**
N^{-1}	^1S	1s	89.87177	6.65441	1	0.22824	0.07022	**0.13464**
		2s	4.58086	1.05497	1	1.37306	2.31438	**0.65505**

Table (4): The inter-particle expectation values $\langle r_{12}^n \rangle$ where $n = -2..2$ and standard deviation for studied systems for ground state.

Ion	state	shell	$< r_{12}^{-2} >$	$< r_{12}^{-1} >$	$< r_{12}^{0} >$	$< r_{12}^{1} >$	$< r_{12}^{2} >$	Δr_{12}
B^{-1}	^3P	1s	14.4021	2.89169	1	0.47662	0.28689	**0.244**
		2s	0.3067	0.43249	1	3.02106	11.07267	**1.39495**
C^{-1}	^4S	1s	21.18226	3.50868	1	0.39256	0.19454	**0.20109**
		2s	0.48219	0.54144	1	2.41214	7.05184	**1.11059**
N^{-1}	^3P	1s	29.25978	4.12508	1	0.33365	0.14045	**0.17081**
		2s	0.7143	0.65844	1	1.98112	4.75041	**0.90862**

Table (5): The inter-particle expectation values $\langle r_{12}^n \rangle$ where $n = -2..2$ and standard deviation of first excited state for studied systems .

Ion	State	*shell*	$< r_{12}^{-2} >$	$< r_{12}^{-1} >$	$< r_{12}^{0} >$	$< r_{12}^{1} >$	$< r_{12}^{2} >$	Δr_{12}
B^{-1}	^1D	1s	14.40501	2.89199	1	0.47648	0.28671	**0.24428**
		2s	0.31787	0.44063	1	2.9584	10.59318	**1.35685**
C^{-1}	^2D	1s	21.18648	3.50911	1	0.39246	0.19442	**0.20099**
		2s	0.49346	0.54793	1	2.38025	6.85692	**1.09147**
N^{-1}	^1D	1s	29.26267	4.12553	1	0.33366	0.14049	**0.17077**
		2s	0.72091	0.66154	1	1.97108	4.70046	**0.90295**

Table (6): The inter-particle expectation values $\langle r_{12}^n \rangle$ where $n = -2.2$ and standard deviation of second excited state for studied systems.

Ion	State	*shell*	$< r_{12}^{-2} >$	$< r_{12}^{-1} >$	$< r_{12}^{0} >$	$< r_{12}^{1} >$	$< r_{12}^{2} >$	Δr_{12}
B^{-1}	^1S	1s	14.4083	2.8924	1	0.47646	0.28666	**0.24423**
		2s	0.32202	0.44324	1	2.94372	10.50036	**1.35458**
C^{-1}	^2P	1s	21.18934	3.5094	1	0.39239	0.19434	**0.20093**
		2s	0.5012	0.55231	1	2.36114	4.74941	**1.08371**
N^{-1}	^1S	1s	29.26835	4.12603	1	0.33362	0.14045	**0.17073**
		2s	0.7307	0.66608	1	1.95648	4.62876	**0.89496**

Table(7):The expectation values for all attraction, repulsion, and Hartree-Fock energies of ground state of 1s and 2s shells for studied .

Ion	state	shell	$\langle V_{ee}\rangle$	$-\langle V_{en}\rangle$	$-\langle V\rangle$	$\langle T\rangle$	$-\langle E_{HF}\rangle$
B^{-1}	^3P	1s	2.89169	46.7400	43.84831	21.92416	21.92416
		2s	0.43249	6.74350	6.31101	3.29036	3.29036
C^{-1}	^4S	1s	3.50868	67.96752	64.45884	32.22942	32.22942
		2s	0.54144	10.22748	9.6867	4.91359	4.91359
N^{-1}	^3P	1s	4.12508	93.14802	89.0231	44.5147	44.5147
		2s	0.65844	14.6006	.13.9431	6.97157	6.97157

Table(8):The expectation values for all attraction, repulsion, kinetic and Hartree-Fock energies of first excited state of 1s and 2s shells for

Ion	State	shell	$\langle V_{ee}\rangle$	$-\langle V_{en}\rangle$	$-\langle V\rangle$	$\langle T\rangle$	$-\langle E_{HF}\rangle$
B^{-1}	^1D	1s	2.89199	46.744	43.852	21.926	21.926
		2s	0.44063	6.8626	6.42197	3.21098	3.21098
C^{-1}	^2D	1s	3.50911	67.9741	64.465	32.2325	32.2325
		2s	0.54793	10.348	9.79967	4.89983	4.89983
N^{-1}	^1D	1s	4.12553	93.154	89.028	44.514	44.514
		2s	0.66154	14.670	14.008	7.0044	7.0044

Table(9):The expectation values for all attraction, repulsion, kinetic and Hartree-Fock energies of second excited state of 1s and 2s shells for

Ion	State	shell	$\langle V_{ee}\rangle$	$-\langle V_{en}\rangle$	$-\langle V\rangle$	$\langle T\rangle$	$-\langle E_{HF}\rangle$
B^{-1}	^1S	1s	2.8924	46.748	43.856	21.928	21.928
		2s	0.44324	6.9137	6.47046	3.23523	3.23523
C^{-1}	^2P	1s	3.5094	67.978	64.469	32.235	32.235
		2s	0.55231	10.427	10.979	5.4895	5.4895
N^{-1}	^1S	1s	4.12603	93.162	89.036	44.518	44.518
		2s	0.66608	14.7696	14.104	7.0518	7.0518

Noted from the above figures (1), (3) and (5) for1s of the ground and excited states respectively, figures (2), (4) and (6) for 2s of the ground and excited states respectively. Represents the relation between one–particle radial density distribution function D (r1) versus position (r_1) for studied system. From these figures it is observed that the maximum values of D(r_1) increases as Z increases, while the locations of these peaks are contracted toward the nucleus where it is noted that the maximum probability density distribution function $D(r_1)$ for N^{-1} is closer to the nucleus from $D(r_1)$ for B^{-1}. This difference occurs because the N^{-1} ion Z=7 exerts a much stronger attractive force on electrons than does the B^{-1} ion (Z=5), it is also observed from these figures when the distance is equal to zero the probability of finding an electron equal to zero (when r =0, $D(r_1) = 0$). This means that the electron is cannot be existed inside the nucleus and when the distance is far away the probability of finding an electron equal to Zero also (when $r = \infty$, $D(r_1) = 0$). this means that it is not possible of the electron to be existed outside the atom.

Noted from the above figures (7), (9) and (11) for1s of the ground and excited states respectively, figures (8), (10) and (12) for 2s of the ground and excited states respectively.

The maximum value of the inter particle distribution function increases where **z** increases.

The maximum probability of the inter particle distribution function $f(r_{12})$ increases as atomic number increases because the influence of increasing in attraction nuclear force.

It was also observed from the figures when r_{12} = 0 the probability of the inter particle distribution function $f(r_{12}) = 0$, { when r_{12} =0 $f(r_{12}) = 0$}. This means that the electron not be closed on another electron and when the distance is far between two electrons the probability of the inter particle distribution function $f(r_{12})$ equal to zero also{ when $r = \infty$ $f(r_{12}) = 0$}. that means the diameter is not found out the atom .

From tables(1), (2) and (3) for ground and excited states respectively, it is noted that the one-particle expectation value $\langle r_1^n \rangle$ when n takes the values (-2,-1) the one-particle expectation value $\langle r_1^n \rangle$ increases where the atomic number Z increases, this is due to the attraction energy between the nucleus and electron increases. While when n takes the values (+1,+2) the one-expectation value $\langle r_1^n \rangle$ decreases by atomic number (Z) increases, where the $\langle r_1^{-1} \rangle$ which represents the attraction energy expectation value $\langle V_{en} \rangle = -Z[\langle r_1^{-1} \rangle]$ and the $\langle r_1^1 \rangle$ represents the distance between the nucleus and electron. it is also noted from tables (4), (5) and (6) for ground and excited states respectively, when Z increases the inter-particle expectation value $\langle r_{12}^n \rangle$ increases where $\langle r_{12}^{-1} \rangle$ represents repulsion energy between two-electrons. When n equal to zero the one-particle expectation value $\langle r_1^n \rangle$ and the inter-particle expectation value $\langle r_{12}^n \rangle$ for all the states equal to unity for all studied systems this represented the normalization condition.

From the Tables (7), (8) and (9) for ground state and for excited states respectively, we observed that the results of the expectation value of attraction energy $\langle V_{en} \rangle$ and expectation value of repulsion energy $\langle V_{ee} \rangle$ increases when atomic number increases because increasing in Z leads to decreasing in the distance between electrons with nucleus, as well as, the distance between two electrons, this product increasing in attraction energy and repulsion energy according to coulomb law.

From these the tables ,it arises that the increasing in attraction energy is greater than that in the repulsion energy, so this leads to increase in expectation value of potential energy $\langle V \rangle$ when atomic number increases for each individual shell and for total system.

Above tables, it is noted the expectation values of kinetic energy $\langle T \rangle$ increases as z increases because of the increase in kinetic energy is the force of attraction of the nucleus of a electron that reduces the distance between the electron and the nucleus, maintain the stability of the atomic system increases the speed of rotation of the electron in orbit to increase the power of centrifugal and the following increase in its kinetic energy $\langle T \rangle$.

Expectation value of HF energy $\langle E_{HF} \rangle$ increases as atomic number increases, which indicates the relation between $\langle E_{HF} \rangle$ and Z because increasing in the potential energy and kinetic energy lead to increasing in the total energy of the system (HF energy).

Conclusions

1.When the atomic number Z increases, the one-particle radial density distribution function $D(r_1)$ and the inter-particle distribution function $f(r_{12})$ are increased.

2.For both one-particle expectation $\langle r_1^n \rangle$, and inter-particle expectation $\langle r_{12}^n \rangle$ are increased when Z increase .

3. All the expectation values of the energies $\langle V_{en} \rangle$, $\langle V_{ee} \rangle$, $\langle V \rangle$, $\langle T \rangle$ and $\langle E_{HF} \rangle$ are increased when the atomic number increases.

4. The results of expectation values of all energies for 1s shell is larger than those in the 2s shells.

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STATE SUPPORT FOR EXPORT ACTIVITIES SMALL AND MEDIUM BUSINESSES: WORLD PRACTICE

Abstract: *In this article, the value of the author's research is to identify the main features of existing systems of state financial support for export of small and medium enterprises (SMEs), to determine the degree of effectiveness of state financial support for export activities of SMEs in foreign countries and Russia, as well as to develop proposals to improve the efficiency of state financial support for the export of national enterprises of small and medium enterprises.*

Key words: *small and medium-sized enterprises, export, import, half-savo savdo, integration, half-and-tisodius Munosbital, financial support.*

Language: *English*

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Introduction

JEL: L43; L94; G18

State regulation of small business is a relatively broad process, regulating its participation in foreign trade activities, ie export-import operations. Accordingly, it is important to study theoretical issues in this area and to develop scientifically grounded proposals. The participation of small businesses in foreign trade is significantly more limited than in large enterprises. This is due to the positive effect of the large exported goods produced, the constant cost per unit, and the relatively low cost of transactional costs, reducing the cost of the products of large enterprises and increasing the competitiveness of small businesses on equal terms. The issue of developing small business exports in the Republic of Uzbekistan is an area of constant reform.

The Strategy of Action for the Development of the Republic of Uzbekistan for 2017-2021 states that "if the people are rich, the state is rich and wealthy, providing reliable protection of rights and guarantees of private property, eliminating all barriers and restrictions for the development of private entrepreneurship and small business." Implementation of the principle "will be stronger." [1] has been identified as one of the key areas. Pursuing these objectives is a key area of ongoing reforms in Uzbekistan to develop proposals to simplify and stimulate small businesses' export practices.

Crisis phenomena observed in the global economy over the past few years have had an impact on international trade in goods. They contributed to changing state development priorities and increasing attention to the export activities of national enterprises. The state system to support the foreign economic activity of national enterprises, including small and medium enterprises (SMEs), began to form in different countries as early as the middle of the 20th century, but was fully developed in the 1990s. Today, this system continues to play a significant role in enterprises entering foreign markets.

The issue of state financial support for SMEs deserves special attention. The activities of SMEs are an important component of the economic and social development of most developed and developing countries. In the context of globalization and growing competition, the entry of SMEs into foreign markets is one of the key elements in the development of not

only the enterprises themselves, but also the entire national economy.

In our opinion, one of the problems is the fact that, at the state level, a number of countries still do not assess the degree of effectiveness of financial support to SMEs. This is especially true for developing countries, including Russia. Despite the fact that in the 2000s. the Russian state began to pay some attention to the problem of financing exporters of the SME category, the effectiveness of the use of these funds remains in question. To obtain a holistic view of the reasons for the current situation in the field of evaluating the effectiveness of financial support for exports in Russia, it is necessary to identify possible barriers to such an assessment.

Recently, government support for export activities has become especially significant for the SME segment. It is this business segment that creates the maximum number of jobs in many countries of the world. In the context of globalization, the strong position of national SME exporters in the global market is a definite indicator of the development of the national economy. And in the coming years, as world trade develops, the importance of this support will only grow.

II. Literature review

State support for exports has long been used by many countries to promote small and medium-sized businesses. Institutions and the export promotion tools they use have been widely developed in OECD countries. The organization developed the General Agreement on General Requirements for State Support for Export Credit (OECD, Arrangement on officially-supported export credits), which became mandatory for OECD member states.

A study conducted by the OECD in conjunction with APEC suggests that countries have a fairly wide range of export support programs. [2] According to the classification used in this study, all export support programs for SMEs are divided into several categories depending on the direction of services provided by the state.

General questions of the theory of state export support, including determining the degree of effectiveness of financial support, were developed in the works of many scientists, such as T. Singer, M. [3], Kotabe [4], A. Panagaria [5] and others.

In the European Union, guarantee schemes are the most common type of financial support, and the main addressee of guarantee schemes is mainly SMEs. In the European Union, the services provided by guarantee institutions are most in demand by those SMEs that were recently formed and are going to enter foreign markets with their products for the first time. [6]

Given the fact that small and medium-sized enterprises bring significant benefits to the country's economy, the state can develop support programs, in particular, by providing tax breaks that will help start-up exporting companies cope with the accompanying difficulties in entering foreign markets. [7]

There are various classifications of export promotion programs. For example, Singer identifies programs of an informational nature (providing informational assistance to beginning exporters, conducting training seminars) and practical ones (searching for foreign buyers, organizing trade missions and exhibitions abroad, researching foreign markets). [8] Cotabe and Zincota highlight export service programs and market development programs. [9] Naidu and his research colleagues divide these programs into four categories: export information (information and consulting services); production planning; marketing support (providing information on foreign markets, searching for foreign buyers, agents or distributors, representing enterprises' products at trade fairs and exhibitions, assisting in negotiations); financing and guarantees (provision of export credit guarantees, subsidies, export credit insurance, tax benefits).

Domestic literature also pays a lot of attention to export promotion programs. In particular, Mamasoatov D.R. [10] considers support for the export of small businesses and private entrepreneurship through information and communication technologies, further expanding export potential, increasing the production of competitive products in modern foreign markets and determining export efficiency through information and communication technologies.

To increase the regional level of small business and undertakings`export potential in country, attracting foreign investors and solving the existing problems in regional system, to determine problems in terms of supporting the small businesses in external economic relations and analyzing the main reasons which are causing to development of it and giving the proved suggestion is the goal of this article.

By Rustamov M. small businesses and private entrepreneurship, which began their activities in the process of lending by banks, are invited to provide unsecured loans on the basis of a “permissive” method was proposed. [11]

The problem is that there are not so many studies of this kind, and they cover data for one enterprise or for a group of enterprises. There are very few such studies at the country level. In Russia, the existing studies dealt only with the relevance and importance of implementing state financial support for exports. No studies have been identified to determine the relationship between government spending on export support and export sales by applying an econometric analysis.

In our opinion, Uzbekistan does not pay enough attention to existing problems and barriers that prevent SMEs from exporting. The export performance of

Russian SMEs is low (the share of SME exports in total exports), and in order to eliminate the shortcomings of the existing system of state financial support for exports in Russia and increase the effectiveness of this support, it is necessary to clearly understand the existing difficulties of SMEs and further develop a set of measures to address them .

III. Analysis and results

There are two points of view in the economic literature regarding the relationship between government spending on export support and export sales of SMEs. The first is that countries with large exports make significant investments in export support. The second is that these countries, on the contrary, spend little on export support because it is already quite developed. The first point of view is quite direct and logical. According to her, state authorities in countries with developed exports recognize the need for trade development measures, and as a result, allocate significant funds to support exports. The second point of view, despite a certain ambiguity, also has a right to exist.

In their study, Wilkinson, Keyllor, and Damiko identify the relationship between changes in export sales and government spending to support US exports. [12] They argue that countries with developed exports spend relatively less on supporting export activities than countries that are at the stage of developing their export potential. It is for such countries that identifying the effectiveness of the state export support system is fundamental to its further development. In order to take into account macroeconomic characteristics, two variables were also used in the model: a state gross product or a gross regional product (GRP) and state unemployment rate. GSP determines the size of the state economy and is a general indicator of its state.

According to the authors, states with higher unemployment will spend more on promoting trade. In mathematical form, the regression dependence is as follows:

EX96-94 = f(GSP,UN,AP94),

here EX96-94 - export sales for the period from 1994 to 1996;

GSP - gross regional product;

UN - unemployment rate;

AP94 - Export Support Costs Made in 1994

The model showed that GSP is a significant variable, while the unemployment rate was not statistically significant. As for the costs of export support, they turned out to be the most significant variable, which allowed the authors to conclude that the costs of export support have a positive effect on the subsequent increase in export sales.

Another study by Coughlin and Cartwright also presented a model describing the impact of government spending on export support on state-level export sales. [12]

Finally, export support costs are the fourth independent variable. Under expenditures are raised the costs of promoting the export of industrial and agricultural goods. This variable is of greatest interest to the authors in their study, and, in their opinion, the costs of export support have a positive effect on state-level export sales. In mathematical form, the considered regression dependence is presented as follows:

EX = f(K, H, L, PROM, u), где EX - export sales;

K is physical capital;

H is human capital;

L is labor;

PROM - export support costs;

and - random error.

The results of the model showed that physical capital turned out to be a statistically significant factor that has a positive effect on state exports. Therefore, the authors of the model came to the conclusion that the increase in physical capital has a stimulating effect on the competitiveness and foreign economic activity of the state. Human capital also turned out to be a statistically significant factor, therefore, it can also be concluded that an increase in human capital contributes to the growth of export sales. As for the labor factor, it turned out to be statistically insignificant.

In this study, the relationship between export support costs and export sales will also be determined using linear regression, but in this case, one independent variable will be used in the regression. This variable is fundamental, which is confirmed by the results of the two models described above. The relationship between the above variables will be analyzed based on their dynamics over a time period of 15 years. The effectiveness of the costs of export support in this case will be determined at the state level as a whole by the example of three countries. The use of one independent variable in the model is associated with the difficulty of collecting additional data in the context of the states under consideration, taking into account the fifteen-year time series.

IV. Conclusions

Based on the results of the study, the following conclusions can be formulated:

1. An analysis of world experience in the field of state financial support for SME export indicates the importance of state participation in the system of stimulating the foreign economic activity of national enterprises. The experience of most countries clearly demonstrates the decisive role of state export support for SMEs, especially for the group of enterprises that is only embarking on foreign economic activity. The accelerated development of exports is facilitated by the formation of an appropriate regulatory and legal

field by the state and the provision of comfortable conditions for SMEs. This allows them to conduct their foreign economic activity along with large business. Instruments of state influence on the export activities of enterprises should be aimed at increasing the number of exporting SMEs and strengthening their positions abroad.

2. The considered experience of the state financial system for SME export support in leading developed countries allows us to distinguish two models of organizing national export support systems for small and medium enterprises. The first model is based on the preservation of a certain degree of freedom of management and foreign economic activity (USA, UK). Under this model, government efforts are aimed at using indirect support measures both at the pre-export and export stages. In this case, information and consultation support measures are implied. However, direct financial support is also provided, including export lending, insurance insurance, and others. The second model (Germany, France) is characterized by government involvement of agents and banks. The main difference from the first model is the priority of the innovative component in the activities of enterprises and, thus, the stimulation of their technological development. The experience of government financial support for SME exports in developed countries is diverse. State support in these countries is a serious support for small and medium-sized enterprises in matters of entering foreign markets, finding new partners and developing economic cooperation.

3. The practice of government stimulation of export activities of SMEs in developing countries reveals differences in the effectiveness of existing support systems in these countries. For example, in China, most export support measures were formal and in practice did not facilitate the process of entering foreign markets by Chinese SMEs. Another situation has developed in India. The Indian system of export support for SMEs is characterized by more intensive work with SMEs in potential sales markets and all kinds of government assistance in finding foreign partners. An assessment of the degree of effectiveness of state financial support for SME exports was carried out using econometric analysis. The calculations show the effectiveness of this support. An analysis of the foreign experience of state financial support for the export of SMEs in developing countries revealed the difficulties encountered by enterprises of the SME category in countries with an imperfect support system, and also identified the measures that need to be taken to improve it.

4. The role of export credit agencies (ECA) as key participants in the system of financing international trade and investment is highlighted. Especially in demand are the services provided by ECA, small and medium-sized enterprises. It is for this category of enterprises that the role of ECA in the system of state export support is paramount. An analysis of international experience confirms this conclusion, since it is SMEs that, as a less protected category of business and at greater risk, need the support of an ECA.

5. The role of state financial support for stimulating the export activities of enterprises is justified. Based on a study of existing studies in the field of state export support, a positive relationship was found in most cases between the costs of export support programs and export sales. In this paper, in order to assess the degree of effectiveness of state financial support for exports, an econometric analysis is carried out for the countries under consideration. The results of the analysis allow us to conclude that, on average, government support for export support has a positive effect on export sales, stimulating their growth. Moreover, it is obvious that government spending on export support is far from the only factor that ultimately affects export sales. On the whole, it cannot be unequivocally asserted that an increase in the volume of state financial support always leads to an increase in export sales, since its effectiveness depends on many factors, primarily on the organization of the system of this support at different levels and on the situation in foreign markets.

6. The state should encourage and create conditions for small and medium enterprises to establish trade relations and production chains with large foreign enterprises and trade alliances. This will allow in the long term to attract foreign investment in export-oriented sectors of the state economy.

In order to increase the effectiveness of state financial support for SME exports to Uzbekistan, the state needs to help increase the competitiveness of Russian enterprises exporting SMEs abroad through improving existing mechanisms of state support. In particular, it is necessary to involve the state and provide support to SMEs at the stage of production (especially with a long reproduction cycle). A major contribution to export promotion is made by government assistance in the development of export infrastructure.

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PSYCHOLINGUISTIC PROJECTS IN THE REGIONS MENTAL MODELING LEXICON IN TERMS OF BILINGUALISM: CREATIVE THINKING AND CREATIVITY

Abstract: *Speech is one of the most important tools for the full development of a person. An understanding of the surrounding people's speech and the child's active speech are essential in any pedagogical process. Language is an integral part of our lives. The language of science is one of the criteria of a certain level of science. Language is connected with thinking and it is his weapon. Language lets you plan mental activities; in this process the task of managing the behavior of one's tongue is the most important task of language. The language has appeared because people need communication. Linguistic sciences are widely used: psychology, psychology, medicine, engineering, aviation, space, judicial psychology, and so on. In this article, we aim to clarify the phenomenon of psycholinguistics on spelling activities, on the basis of which cognitive science fields, creative thinking, creativity and their expression in speech, language and thinking.*

Key words: *psycholinguistics, speaking activity, creativity, divergent, nonstandard, creative thinking.*

Language: *English*

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Introduction

According to E. Tikheeva, "mother tongue should be the basis of education, which is indefatigable and comprehensive." Timely and sophisticated speech is the most important and precondition for the emergence of psyche in a child and its subsequent development. At the right time, it means that the child begins with the early days of birth, which means that it is enough to have enough language material and to use the full potential of the child at the age of the child trainings. "This" decisive "developmental stage of speech is the first three years of child's life: the anatomical ripening of the brain's speeches at the end of this term will largely end, the child will develop the basic grammatical forms of his native language and form a great word stock. If he did not give enough attention to the baby talk in the first three years, then he would have to do a lot of work to fill his place in the future. " Just like the tongue, the thinking that develops and develops throughout a person's shared workplace is the opposite of everything he has to do. Thinking, on the other hand, reveals the ability to think. Thinking is the highest form of human activity. Things and phenomena, which are indistinguishable from intuition and perceptions, are consciously reflected in thought. There is a thought in the thinking process, which can occur in the form of judgments, concepts, and conclusions in the mind of the human being. The strong link between language and thinking is due to the need for people to produce productivity, to exchange ideas and to work together. Though language and thinking can not exist without each other, they are not exactly the same.

Thinking is the object of lens, and the tongue is the way to express, strengthen, and convey it to others. The word and the concept are interdependent.

The principle of the interconnectedness of language is crucial for children to develop a system of teaching their mother tongue, and to establish a

demand for interdependence between education and teaching.

Intellect, that is, the ability to perceive the outside world with memory, imagination, fantasy, thinking, and speech, is an important feature that divides man from the animal. And intellect and speech appear in the human child at the age of first, and it is rapidly improving only when the teenager and the young man do not just develop their organism, but also the human speech.

Creativity is the ability of this person to create new ideas, to deviate from the traditional patch of ideas and make original, original decisions.

Theoretical background

For the first time in this term, D. Simpson described in 1922 as the non-standard way of thinking. In the field of creativity study in Russia, A.Matyushkin, A.V.Petrovskiy, M.G.Yaroshevsky, V.N. The scientists like Druzhin have been working.

There are three theories that explain the relationship between intellect and creativity in psychology. D. Veksler, G.Ayzenk, L.Termen, R.Stenberg and others consider intellectual and creativity as a unit of high level of human abilities. Intellect is the highest stage of cretinism. It means not only that they are in union, but also creativity is the product of intelligence. High intensity is the basis of a high level of ability. Sub-intelligence is a sub-intelligence. Gans Ayzenk considered creativity a kind of skill. Creativity is defined by the high intellect.

Intellect is the adaptation of humans and animals to a new environment. V. Shterni, J.Piaje, D. Veksler and other authors regarded the idea as a general ability to adapt people to new living conditions. In their research, thousands of American schoolchildren studied the logityood method. At the beginning of the research, IQ (intelligence coefficient) was detected. Students were divided into groups according to the IR curve, and were traced back to 30, 40, 50.60 years. Over the years, those with high intellectual coefficients have shown high performance in life and activity. Experts with low IQ coefficients, in contrast to them, achieved 30 times less.

But other studies have shown that intelligence and creativity are not interconnected. Creativity is not a person's adaptation to life but a change of it. There is also a theory that the main factor of creativity is that it is human degeneration - that it can not be adapted to the environment and social environment. Some scholars have described human creativity as being free from external influences and human beings. A person who can not adapt himself to the real world begins to create creativity and to overcome his loneliness. A.Adler considers that creativity in human beings is a means of replenishing the existing incompleteness complex. Empirical research shows that creatively talented children face severe personal and emotional challenges. In studies, we can see that the results of these children's activities in schools are less likely to be.

Another scientist who contradicts creativity and intelligence is J. Guilford, who builds his theory on two different perspectives. That is convergent and divergent thinking. The convergent thinking is to analyze all the available means and to choose the only acceptable one. Convergent thinking is based on intellect. Divergent thinking is a type of thinking that creates different options for solving the problem. Divergent thinking is based on creativity. Thus, intelligence and creativity are two types of disadvantages that can be attributed to the process of data processing. Creativity is responsible for the reproduction of existing information and creation of an infinite new model. Intellekt is responsible for applying the information in real practice and adapting to the environment. Third, they look at two different factors, which are interconnected with intellect and creativity. The psychologist, personally oriented, A. Maslau and others did not recognize the creative ability. Creative activity creates some personality (interest, risk), depending on the skill of a person. But in order for this activity to be manifested, a person must have a high level of intellectual abilities. They think that a person with a lower intellect will not have any creativity. Medium creativity in Mediterranean intellectuals, people over 120, with IQ coincidence, have excellent creativity.

Let's analyze the relationship between intellect and creativity in the point of evolution. We see the Intellect as a flexible capability, which has been put into the mold and does not create great discoveries. Intellect only refund. According to psychologists, this idea is wrong. The reason is that the theory of evolutionary development emphasizes that human development is a major factor in the development of anthropogenesis. Examples of this are the use of firearms and weapons. It is adapting to creativity, creativity, originality, creativity, creativity, creativity. Who first created the great discoveries, arrows, and who invented the idea of using fire? Intellectual or Creativity? If creativity is concerned, then where did the intellect go? Thus, such comments reduce the intellectual role in the creation of human technical and scientific progress.

It is well known that some people have a clear understanding of human sciences in the field of science. We have observed that the artist with a higher level of talent is confused by simple mathematical

samples and that the magnificent mathematician has less artistic abilities. Can we say that these people are smart?

Main part

Spirman believes that people have a common intellect. He thinks he has the ability to distinguish people from one another. Spirmen has developed a factor analysis, a statistical procedure. It describes the interconnection of the associated elements. The spirits say that the total amount of skill is dependent on our mental conduct. So far, Spirman's theory of general intellect, that is, the theory of unilateral intelligence, has caused many dissatisfaction. In contrast to Spirmend, Terstoun introduced mental abilities through 56 different tests and 7 clusters. Terstoun did not score people on a single scale. He believes that if the person successfully solves all the issues in the cluster, he will achieve similar success in all other areas. They compared mental ability to physical abilities. He believes that the world heavyweight champion can also be a good figure of sport. Because physical training in it allows this. Satosi Kanadzava (2004) sees the common intellect as a type of intellect. The common intellect can help us solve problems in daily life.

By the 1980s, there was a comparison of Spiremennig's single theory of intelligence and the theory of Therapeutic achemical capabilities. In their view, if one is successful in a cognitive area, he will achieve similar success in other areas. The key factor in adapting to life is not the general intellect in which the individual is, but in time, the abilities begin to influence one another. X.Gardner regarded the intellect as a combination of some capabilities. He spent his research in low-income people. The injury to the brain may put an end to the abilities, but might consider leaving the remaining abilities.

Gardner, who has spent some of his research on physiologically induced speech, especially in speech centers, has seen lower scores of intelligence tests. Some of these syndrome representatives did not develop speech. However, they have the ability to calculate multiplication as fast as an electronic counter. Some have known the dates of a historic day. Owners of such syndrome have been able to succeed even in virtuous creatures. Using the above facts, Gardner came to the conclusion that there were several different consciousness, not intellect. Generally speaking, a person has 8 different capabilities. If the person achieves success in some area, he says that he will achieve good results in the remaining areas.

R. Steinbegger, R. Wagner, joined the idea of Gardner But the individual analyzed the mind with three different factors:

1. The existence of acalemic skill in solving the problem. These skills are evaluated by defining the only correct answer in mental tests;

2. Practical Intelligence will help you to choose from a wide range of problems in adapting to the environment in everyday life;

3. The problem of creativity, which is the highest form of independent thinking, has been studied extensively in foreign psychology, which is largely interpreted as creativity. We use the term "creativity" so that we do not use this definition as "creative" ("create" - English, "creativity"), and that creativity is not a high level of intellectual activity. The problem of creativity in psychology has been consistently studied since the 1950s. However, in our research, we have termed the word "creativity" in Uzbek as conditionally as "mental creativity" and we have to learn it as a psychological basis for independent thinking. So in the future, when thinking about intelligent creativity, the idea of non-existence, its independence and "creativity" is implied.

There was an inadequate link between creativity and traditional testing of the mind and the success of solving the problem. This quality assumes that the essence is dependent on the intelligence, the ability to use the fast method and the ability to use different methods.

a) In 1962 J. W.Getzels and P.W.Jackson published in the press that there is no connection between the indicators of intellectual creativity. They just introduced their coefficient (Sr) to measure creativity. The mental talent is measured by the amount of success achieved in the child's age and is determined by the IQ coefficient. The ability to distinguish IQ and Cr coefficients was a factor contributing to the logic of intellectual creativity. That is why in the 60's of the 20th century more than 60 definitions of creativity were developed. By analyzing the definition of creativity, it can be divided into 6 types: a geshtaltyk definition (the creative process is described as breaking down geshtalt, creating a better one), an innovative (new) definition aesthetic or expressive (emphasis on creativity), psychoanalytic (creativity is defined as the relationship between "I", "I" and "Ideal - I"). '); problematic (which defines creativity as a process of solving a problem, which can be summarized by JP Guilford's definition of "creativity is a divergent process of skill"), the sixth type may include different definitions that are not included in any of the types described above (for example, filling the knowledge base "universal").

b) It is difficult to evaluate the content, essence and structure of definitions related to the term "creativity" that we have accumulated in the present. The researchers argue that "understanding creativity requires creative effort. One of the authors of recent studies has described creativity as "something that is important and new," or "in other words, these people's efforts to change the world." One of the most prominent researchers of the XX century, M.Vallach [10] stated that intellectual tests were not interconnected with the high achievement of creative achievement. Because of the diverse intellectual and creative nature of students aged 11-12, it is divided into 4 different groups:

c) Students who have achieved a high level of intellectual and creative self-esteem are rightly self-centered, they are interested in all new things and are independent in their evaluation;

d) b) those with a high level of intellectual and creativity who are at low levels of student intent on achieving success in school but hide their secrets and diminish themselves;

e) c) those with a low intellectual level and creativity tend to differ from others with anxiety, neglect, low social adaptation;

f) d) The intellectual level and creativity are easily adapted to the situation, and the social-intellectual level is high, but poorly-labeled companies are rightly valued.

Thus, the relationship between creativity and intellectual level affects the personal qualities of learners and their adaptation methods. According to Steinberg and Gardner, a few skills can be successful.

One of the criteria for creativity is non-standardity. As EP Torrance points out, the unique and original answers do not always match the essence. Often, there is a mixing of the content of the concept unreasonably: the creative ability is considered to be the same as non-standard, originality is interpreted as unique by the unique answers in the probationist group. Nonstandard is originality (the concept of widerness.

Discussions

The second criterion is understanding. In this case, it is understood that the tester understands the problem. Intellectual tests require convergent thinking from the individual. Creative tests require divergent thinking.

Creativity is creativity, which at the same time creates new and valuable ideas.

Sternberg and his colleagues developed five components of creativity.

1. Multipurpose knowledge of the person. The knowledge we gained was the basis of our many ideas. The more we have worldly knowledge, the greater the number of blocks in our minds. The more we learn to solve life's problems, the easier it will be to resolve it.

2. Lets see, re-create, and reconnect imaginary thoughts and events. We imagine the key element of the problem and take it to a new level.

3. Risk - Looking for new impressions. This can be seen in two ways. That is, the first one can be seen as a decisive step in overcoming the problem and overcoming the problem. People with such traits are likely to have a new experience rather than return.

4. Internal motivation creates a sense of excitement and satisfaction in dealing with complex issues. The creator does not think about the duration of the issue, the revenue generated by it, and the bidders. The main focus of attention is the feeling of satisfaction and stimulus in solving the problem. When asked by Isaac Newton, "How did you handle such complicated issues?" He replied, "I thought about this problem day and night."

The creative environment helps to support creative ideas. Positive relationships with and co-operation with colleagues serve as an impetus for the development of individual ideas. However, it must be noted that in some studies, the negative impact of the social environment on the individual has also been observed. For example, American students have been assigned to write essays. They have been warned that their essay will be tested by their classmates. The other group was just writing essay. The findings indicated that the group was notoriously compromised. In this case, we can clearly see the negative impact of social media on creativity.

Nancy Kantor, John Killstrom introduced the idea of social intellect beyond the academic intellect. Social Intelligence - is to understand and overcome certain social situations. S. Eppstein, P. Mayer, also agree with this idea. Why do academic talented individuals face the challenges of finding a place in society, achieving family happiness, and achieving any success? S. Epstein, P. Mayer, believes that the most important part of social intelligence is emotional intelligence. That is, it is the ability to perceive, express, understand, and manage your own emotions. Conscious, emotionally mature individuals are self-conscious. These people are the ones who can not overcome the depression and emotions.

The study of the emotional intelligence was also investigated by E.Torndayk, Golman and other scientists. Dj. Mayer, P. Solovey, D.Krauzo developed tests that investigated the four components of the emotional intelligence included in the skill. These are:

- Accepting emotions (identifying them from a human face)
- Understand emotion (telling them to change)
- Emotion management (knowing which emotion is best)
- Ability to use emotions in a flexible and creative way

If a person has a high intelligence coefficient, but the emotional intelligence of a person with a head injury is reduced. Neurologist Antonio Damasio has experimented with Elliot, a patient with brain cancer in his own experience. He has surgically removed the tumor in his patient. He did not notice any emotions on the face of his face during the hours he had been interviewed after the patient was healed. Elliot showed pictures of various human casualties and various human trafficking. Elliot knew he had no feeling and could not describe it. He knew that he could no longer feel anything. As a result, Elliot lost his job and his family. It does not resemble her. Elliot lost his position in society and failed.

But some scholars believe that emotional intelligence is far from intellect. But it should be noted that the emotional intelligence activates the desire and interest of us. It forces you to think less about the meaning of the problem. This process is important for creativity. Does Intelligence Depend on Cerebral Hemispheres? When investigating this issue, Byron discovered that the weight of the Beethoven's brain was significantly worse than the normal human brain. There were also opinions that those who are ill are brain-resistant, with high intelligence. But, unfortunately, some scholars have discovered that the intestine's brain is much lower than normal humans. On the contrary, some criminals have the weight of their brains as if they were Byron. However, later, MRI shows the relationship between brain and brain when analyzing the brain. The high intellectual level has determined not only its weight, but also its dependence on the activity of the frontal and parietal moon.

Einstein and Canadian brain have found that there is almost no difference between their severity when examined. But Einstein's brain had a 15% higher than the Canadian brain. The lower part of the brain is responsible for mathematical and spatial data. On the contrary, Einstein's brain was found to have lower activity areas. Therefore, Eterne and other physicists could see the slowness in speaking and learning.

The first step in the history of Intellect's measurement was realized by English scientist Francis Galton. According to Galton, the character is inherited from generation to generation through heredity. He wanted to explain his mental abilities through heredity. Galton's research did not produce good results, and we can see that males are far superior to those of females. Although Galton's research has not yielded results, we recognize that he is the first researcher to identify his mental abilities. One more step taken by Intel to diagnose it was done by French scientist Alfred Bine. Another study was conducted in adult children. The intellect coefficient of children who are older in one environment has the same effect as the child. But as they grow older, this similarity is diminished. Research has shown that intelligence has lost its similarity over the years. In addition, child-adopted children are more similar to their biological parents than stepmother parents. The inheritance and social environment are interconnected. He taught mathematical talent in a mathematical-oriented gymnasium, showing years of success in checking his data. This is because both hereditary and social factors (ability + education). So, our genes shape our environment, and the environment shapes us ourselves.

J. Mac-Wicker studied at Tehran's low-income orphanage. Many have found that 2-year-olds cannot independently sit, and that 4-year-olds cannot walk. The harvesters did not pay much attention to the crying of children and their obstinacy. As a result, these children were "passive" and were left out to be inferior children with no need for environmental impact. Deprivation conditions were exacerbating birth defects. Hant created a program called "Training Human Capabilities." Throughout the program, Tutant trained educators to work with children playing games. In the study, 11 children were selected. It has been found that they have started to pronounce up to 50 words in the age of 1 to 11 months. As a result, those selected children grew up to be very developed children. In this context, we can say that the role of environment is also important for the formation of mental abilities. In the initial stage of human development, the hereditary factors appear to be more advanced. However, over the years, the environment has a major impact on the development of mental abilities. Its subsequent development or depletion will remain environmentally friendly.

There are sex differences in mental ability and we can see that women's memory is stronger than men. In men, mathematical abilities develop well. When we pronounce the word of intellect, we consider

it to be measured by tests. But how realistic are these teeth. How much do we trust them? We can see that the questions of these types of tests do not take into account the speeches of the representatives of all levels. He even mentioned that Alfred Bine needed to work on an analysis of his own intelligence tests. The reason is that the results of these tests are far from reality. Moreover, such tests are aimed only at researching one aspect of the intellect. It was observed that the results of those with high emotional and applied intelligence do not show good results in these tests. However, the IQ coefficient has not lost its significance at present.

If adults around the child are trained to speak correctly from the cradle, then this child develops intellectually, in which the ability to imagine, to think and to imagine; at every age, this capability improves. Together with the development of the child's intellect, his emotional and will also improve.

Language is an integral part of our lives, and we regard it as something that must be left alone. What is the language itself, how we talk about it, and we do not think much about how to learn how to talk. Everyone knows that language is a special science, and its name is linguistics. Despite the fact that this science is rapidly developing and, undoubtedly, has achieved remarkable progress in this regard, it is evident that we now know very little about the language that human beings are and which cannot exist as a member of society we are.

The question is: is it necessary to study the language at the moment when many tasks are to be addressed immediately before the people? Do you have the power and spending experience to study the secrets of language? Often, linguistics is a second-level science fiction and now it is more important for humanity to develop other subjects such as physics, chemistry, astronomy, and medicine.

While we are talking about the importance of developing other subjects, let's answer the question if language can have any impact on the development of natural sciences. The language and theory are now at the center of the methodological problems of contemporary science, because "the theory of generalized knowledge and the starting point for the formation of knowledge is formed in the language, which gives the language a special place in the process of learning, opens up new scientific horizons in front of science, and forces him to quit the corner from a peaceful and quiet place with his or her own humanitarian aspirations.

The language of science is one of the criteria of this level of science. The well-known physicist Dr. Geigenberg states: "One of the criteria for the ability to describe in the normal language for physics is the extent to which it can be reached in the appropriate field." One of the aspects of scientific and technical development is to popularize science, to introduce the general population to scientific achievements. The success of this work is related to the fact that scientific information is often explained in terms of how people understand it. And we face language problems in this place.

It should not be forgotten that the natural sciences have a huge place in the development of humanity, our everyday life, and still the most interesting, complex and unexplored nature of nature is man. Therefore, in recent years, much attention is paid to human sciences, and above all, to psychology.

The word "linguistics" is often used in the same sense as "grammar", and learning the language in the same way as learning the suffixes, additions, rules of the tour, and so forth.

Of course not. Modern linguistics is a multidisciplinary science, some of which are connected to psychology. Linguists are now developing different views on the language: they are now regarded not only as a system of historical development, but also as a separate activity of a person, not only as a set of words and rules of their application.

When we use the word "tongue," we mean two things-language and speech. The first of these differences was the Swiss scientist, Ferdinand de Sossyur, who opposed the speech, which was very important for the further development of linguistic science because "we separatism from the individual through the separation of language and speech. In other words, this is the differentiation between the joint exercises by all the people who speak a language in a special way by a person.

For us, these differences are important, because we speak about language as well as speaking (speaking child speech, for instance, rules and methods of language system). Over the past several times, it has been repeatedly attempted to introduce different conceptual systems. One of them belongs to the well-known Soviet-era linguist LV Herba. It focuses on theoretical knowledge (generalizing psychological and psychological consciousness), the language system (generalizing the rules out of the whole) in the theory ("speaking and understanding events in a particular era in a particular social group") and language material (speaking activities). The latter case is termed LV Harber as a "common sense of speech and understanding." LV Harber's three-member system was perfected by the Soviet-era

linguist A. Leontev. Aalenontev speaks of "speaking ability"

- a language system that speaks the language of the person who speaks the language, the language process, the speech itself, and the language standard - the language as an out-of-the-box system. Thus, apart from language and speech differences, he has also highlighted something that exists in the mind of the human being, allowing him to use the tongue, to speak, and to understand the spoken words (speaking ability). This is a mechanism to engage in speech activities.

Recommendations

Typically speaking activities are divided into four categories: reading, writing, listening, listening. They are intertwined in pairs and are intended to implement the language system

Another feature of human being is its own human need, which is the need for communication with other people, "the need for emotional communication." (K. Obuhovsky). It was because of this need that the language originally originated. The need for communication is always the result of language acquisition. The reason for the child's learning is that he is allowed to work with adults, and for this he needs to understand what the child is saying to him and to speak for himself. It can be said that "the three qualities of the tongue" (the combination of experimentation and synthesis - to think about - to communicate). Language research is of great importance in solving many of the most pressing practical tasks, independent of general interest.

Some of these functions are derived from the above-mentioned tasks of the language - with the help of a language, to make human experience more accurate, to use language-expressing cultural norms to have a stronger and stronger regulatory impact on one's behavior, It is important to explore the language so that the dialogue (for example, in the field of social relations) is more successful. There are also other practical issues directly related to solving language problems that are solved. Psychology, theory of management, and social sciences gained a range of linguistic functions. In particular, the study of psychological processes involves the study of the initial vocabulary processes. How the development of ideas, how to solve intellectual and practical problems, how the child adapts to an environment (a material and a social environment) - answers to these questions require learning not only the subject matter, but also the essence of the speech.

Communication and management are another major aspect of linguistics. Propaganda and advocacy (regardless of whether it is direct communication or through the media) is essentially the use of language to influence the human psychic world. In order to be able to influence language effectively, it is important to know the mechanism of this effect and its own speech mechanisms. True linguistic tasks can occur, for example, in the intelligent organization of the operation of the operator, which communicates with words, such as aircraft, spacecraft, and so on.

Another aspect of using linguistics is the aphasia that is the focus of speech disorders, caused by brain injury, injury or injury to the brain. The diagnosis and treatment of these disorders depend largely on the changes in the patient's speech. It is necessary to formulate specific language features for the abnormal speech, which requires the help of the physician-aphasian linguist in this place. Corruption in the situation is not the only language that can help the human condition assessments. In some cases, people who have been well-trained (in the times of psychological distress, cramps) do not experience any defects in physiological parameters. However, their speech changes as difficult as a specialist does not understand. Often, only language proficiency can testify to this.

As mentioned above, the language is directly related to the processes of learning and, moreover, the level of language development directly depends on the overall level of mental development. Therefore, a special study of the child speech can help identify defects or progress in mental development, even if this type of other investigation fails to identify these deficiencies.

Conclusions

Linguistics can also help the criminals. For example, finding a criminal on a piece of speech (written or oral), exposing the guilt of his instructions (deliberate speeches can be made by someone who does not have a specialist). And finally, the traditional practice of linguistics is toteach foreign languages. Without a detailed description of the language, it is impossible to speak the language and its speech.

Contemporary linguistics is not only the language of the current language, but also the language of speech, the study of the person who speaks. As a language study, it is a rapidly developing science-psycholinguistic science that has become an integral part of engineering, aerospace and space psychology, is used to detect and treat various speech deficiencies that can be used to study the problems of children's speech, psychology and criminalism. Is important.

Developing speech, especially for children of small children, is a complex psychic process at all.

At the third stage of the Speech Development, its subject matter (lexicology and grammar) is closely linked to the needs and content of the child, which interacts with the adult, changing the communication function of the child.

This leads to the development of new, more complex and comprehensive aspects of speech. Speaking in a child's spiritual setting plays a key role in enhancing the role of factors and factors that contribute to the development of the child at different stages. The issue of the driving force of speech development is also of special importance because of the rapid and sudden fulfillment. Determining the forces that encourage or encourage children's speech is a key to pedagogical efforts, with a clear objective in this process.

Developing the speech of preschool children is a complex psychic process, not just a child's imitation, but also because of the need for communication and communication in these children.

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THE KARAKALPAK LEGEND "MAZLUMKHAN SULU" AND ITS SUBJECT PARALLELS IN THE KHOREZM FOLKLORE

Abstract: *The article is devoted to one of the little-studied themes of Karakalpak folklore - the problem of migration of folklore scenes. The author of the article, based on an analysis of folklore material, attempted to link the history of the origin and formation of the legend of Mazlumkhan Sulu with the parallels found in Khorezmian folklore, as well as to identify the historical and traditionally epic prerequisites for the migration of the plot to Karakalpak folklore.*

Key words: *legend, plot, motive, migration, parallels, folklore, tradition, source, epic.*
Language: *Russian*
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КАРАКАЛПАКСКАЯ ЛЕГЕНДА « МАЗЛУМХАН СУЛУ» И ЕЁ СЮЖЕТНЫЕ ПАРАЛЛЕЛИ В ХОРЕЗМСКОМ ФОЛЬКЛОРЕ

Аннотация: *Статья посвящена одной из малоизученных тем каракалпакской фольклористики - проблеме миграции фольклорных сюжетов. Автор статьи на основе анализа фольклорного материала, предпринял попытку связать историю зарождения и формирования легенды о Мазлумхан сулу с параллелями, бытующими в хорезмском фольклоре, а также выявить исторические и традиционно-эпические предпосылки миграции сюжета в каракалпакский фольклор.*

Ключевые слова: *легенда, сюжет, мотив, миграция, параллели, фольклор, традиция, исток, эпос.*

Введение

Хорезмский оазис, как один из центров древней цивилизации, играл существенную роль в культурной жизни населявших его народов, в том числе - каракалпакского, который на протяжении долгих исторических периодов находился в тесной экономической и культурной взаимосвязи с народами Хорезма. Следы этой взаимосвязи особенно явно прослеживаются в каракалпакском народном фольклоре. Состав каракалпакских народных легенд, как и других тюркоязычных народов, обогащался за счет заимствований, как у соседних народов, так и собственных – автохтонных. Большое влияние на оформление отдельных каракалпакских легенд оказали сюжеты хорезмского фольклора.

Одним из наиболее интересных и своеобразных из них, является сюжет «принцесса и строитель раб», оставивший глубокий и яркий след в обогащении тематики каракалпакских народных легенд.

Каракалпакская версия народной легенды «Мазлумхан сулу»

Топонимическая легенда с сюжетом «госпожа и раб строитель», приурочена мавзолею Мазлумхан сулу, культовому сооружению, находящемуся на территории Ходжейлийского района Республики Каракалпакстан. Данное культовое сооружение по сей день является местом паломничества местных жителей. Время

постройки мавзолея, по данным специалистов, относится к концу XII - началу XIV вв. [1, с. 569-585]. Первые исследования данного памятника были произведены А.Ю.Якубовским в 1928-1929 гг., затем повторные исследования были осуществлены в промежутке 1940-1980 гг. археологами Ю.В.Кнозоровым, В.Н.Ягодином, и Г.Хожаниязовым, которые акцентировали свое внимание так же на содержании легенды. Одну из первых записей легенды произвел известный каракалпакский этнограф Х. Есбергенов. В 1964 г. он записал у информанта, текст легенды, однако, в подготовленной им статье этот текст не был приведен. Согласно легенде, Мазлумхан сулу была дочерью хана, которому подчинялись народы Индии, Передней и Средней Азии. Территория Хорезма была уделом Мазлумхан сулу. Один из рабов, являвшийся строителем из Индии, влюбился в Мазлумхан сулу. Мазлумхан тоже полюбила молодого человека. Однако, зная, что отец не согласится отдать её за раба, а также, чтобы проверить истинность его чувств, она велела ему построит сарай (дворец), который бы не был похож на все другие, существующие. Раб построил для нее этот дворец. Увидев дворец, она еще больше полюбила его. Зная, что при земной жизни они никогда не соединятся, Мазлумхан сулу сказала ему: «Если ты действительно любишь меня, то бросайся с крыши этого дворца». Раб повиновался и погиб. Вслед за ним бросается и умирает сама Мазлумхан. Оба они были похоронены во дворце, ставшем мавзолеем [2, с. 77]. Многочисленные варианты легенды, бытовавшие среди народа, факт наличия надмогильного камня с обрывками стихотворения, давали пищу для размышлений многих исследователей. Обрывок стихотворения был переведен специалистами, и на его основе Х.Есбергенов попытался воссоздать реальную историю о Мазлумхан сулу, легшую в основу легенды.

На основе данных, собранных у местного населения дворец, ныне функционирующий как мавзолей Мазлумхан сулу, был построен, в тот период, когда Индия и Хорезм находились под властью единого правителя. По мнению этнографа, постройка дворца относится к периоду царствования Махмуда Газневи (998- 1030 гг.), власть которого простиралась от границ северной Индии до южных берегов Каспийского моря, включая области нынешнего Афганистана, северо-восточного Ирана. Газневидское государство играло большую роль в судьбах Ирана и Средней Азии, в частности Мавераннахра. За время своего царствования Махмуда Газневи совершил семнадцать грабительских походов на Пенджаб, Кашмир и другие области северной Индии. В один из походов Махмуд вывез из города Канауджа 20 миллионов дирхемов, 57 тыс. рабов и 350 слонов [3, с. 359]. Можно предполагать, - пишет ученый, - что, часть этих рабов участвовала в различных строительствах в Хорезме, в том числе постройке мавзолея Мазлумхан сулу [4, с. 69]. Этнограф, опираясь на приведенные данные, относит постройку мавзолея к IX – XI вв. Опираясь на другой вариант легенды и содержание стихотворения с надгробной плиты, перевод которого был произведен А. Некрасовым, Х. Есбергенов пытается связать Мазлумхан сулу с культом, широко распространенной на территории Средней Азии еще с древности-культом Святой девы. В доказательство своего вывода он приводит текст вышеупомянутого стихотворения, который гласит:

О близкий…
Мной гордись!
Не думай, что я несчастна в келье праха.
Знай, что я – приближенная святилища святости.
И считай, что я одна из затворниц рая.
Райская прислужница [4, с. 66].

Как видно из содержания стихотворных строк, в ней достаточно явно отмечено то что, Мазлумхан сулу умерла девственницей. По представлениям многих тюркоязычных народов, в том числе каракалпаков, девственницы после смерти обязательно попадают в рай. Вывод исследователя, в какой-то мере совпадает с мнением востоковеда А. Некрасова, о чем он несколько раз упоминает в своей статье. Востоковед обратил внимание на слово «мешшатэ», которым по его утверждению в Индии называют сваху, а в Персии – женщин, в обязанности которых входит расчесывание волос невесты перед свадьбой, украшение её [5, с. 584]. Видимо, Мазлумхан сулу перед захоронением была убрана как невеста. Обычай захоронения в свадебном убранстве был в древности широко распространен у многих народов мира. Истоки его связаны с культом Вечной Девственницы [4, с. 67]. Укреплению вывода этнографа, в какой-то степени, послужила традиция каракалпаков об особом положении девушек в обществе, сохранившаяся до наших дней.

После обнаружения в 1971 году надмогильного камня, этнографической экспедицией в местности Кетен кала, находящейся неподалеку от мавзолея Мазлумхан сулу, и после его исследования Х. Есбергеновым, обнаруживаются новые факты, касающиеся данного мавзолея. В связи с этим в 1976 г. в печати появляется статья, посвященная аналогичному с Мазлумхан сулу по содержанию стихотворному тексту, с надмогильного памятника из Кетен калы [2, с. 77]. Стихотворные тексты обоих надмогильных памятников принадлежат представителям суфизма

мутазилитского толка. Суфизм, возникший значительно раньше в VIII в. на территории Ирака и Сирии, к XI-XII вв. получает широкое распространение в Средней Азии. В низовьях Амударьи одним из центров суфизма, несомненно, было культовое сооружение Мазлумхан сулу. Помимо одноименного мавзолея с могилой мученицы (слово «мазлум» переводится «мученица») [6, с. 86] на этой возвышенности сохранились Календер-хана – общежитие дервишей и развалины мечети Ережеп халфа – одного из подвижников дервишеского ордена. Все выводы исследователя наводят нас к тому, что прототип легенды, то есть Мазлумхан сулу, погребенная в мавзолее, который носит её имя, является представительницей суфизма. В качестве доказательства он приводит другой вариант легенды, которую подкрепляет данными полученными от информантов, согласно которым Мазлумхан сулу вела аскетическую образ жизни, и провела жизнь в одиночестве [4, с. 69]. Данное этнографическое изыскание о Мазлумхан сулу, явилось ключом в определении истоков формирования легенды и его вариантов.

Сюжетные параллели каракалпакской легенды о «Мазлумхан сулу» в хорезмском фольклоре и их взаимосвязи

Комплексное изучение путей формирования легенды в региональном масштабе, куда входит фольклор народов Хорезма и Каракалпакии, на наш взгляд, дало нам существенные выводы о традиционных путях её оформления как легенды. Хорезмский вариант сюжета легенды известен нам по труду Г. П. Снесарева, занимавшегося исследованием религиозных культов хорезмского региона [7, с. 160-161]. Текст легенды ученый записал у шейха мазара Диванаи Бурх в г. Куня-Ургенче, но имя информанта не упоминается в работе. Для наглядности в сравнительном изучении с текстом легенды о Мазлумхан сулу, приводим его в наиболее полном варианте. «Когда Тюрябек строила, здание теперешнего мавзолея Шейх Шерефа к месту строительства неожиданно подъехал на ишаке какой-то неизвестный дивана, и обратился к хозяйке со странным вопросом: «Не продашь ли ты мне, Тюрябек, этот дворец?». Поняв шутку, красавица ответила: «Хорошо, но только все это здание золотом!». Дивана, а это был не кто иной, как святой Шейх Шереф, поднялся на купол мавзолея и потряс правым рукавом над отверстием в потолке. Из рукава посыпалось золото, и сыпалось до тех пор, пока вся усыпальница им не заполнилась. «Освободи теперь от золота этот мазар», - сказал Шейх, и Тюрябек выполнила его приказание. Зачем я только продала дворец, - засомневалась Тюрябек, - меня теперь никто не будет вспоминать, раз я добровольно лишилась этого здания!». В слезах она уснула и во сне увидела то чудесное здание, которое находится в раю. Пробудившись ото сна, она собственноручно начертала его план и приказала начать строительство. Мастера построили его в течение семи лет.

Со строителями Тюрябек рассчиталась золотом, полученным ею от Шейха. Только один мастер, молодой раб строитель Кул Гардан, наотрез отказался брат деньги, и потребовал любви самой Тюрябек. «Если ты бросишься с высоты этого прекрасного портала, я поверю, что ты меня любишь», - ответствовала красавица. Кул Гардан не замедлил доказать свою любовь и погиб. Она положила голову погибшего к себе на колени и сказала: «Мы увидимся с тобой на том свете». Она похоронила мастера около сооруженного им здания» [7, с. 160-161]. По другому варианту, который тоже был зафиксирован Г. П. Снесаревым, выбирает смерть и сама Тюрябек [8, с. 114]. Сходство содержания текста легенды явно претендует на вариантность его с легендой о Мазлумхан сулу, за исключением имения в нем мотива, связанного с другим персонажем в лице Шейха Шерефа. В обеих легендах фигурирует главные герои сюжета «принцесса и строитель раб», и остается уточнить, которая из них была основным источником вариации сюжета и оформления другой легенды. На основе исторических источников, мы попытаемся это установить. Сам Г. П. Снесарев игнорируя легенду о Мазлумхан сулу, обращает свое внимание к другой легенде с традиционным сюжетом «принцесса и строитель раб», то есть легенде связанной с Биби-ханым, где фигурирует прекрасная жена самого Тимура и влюбленный в неё молодой раб зодчий, потребовавший в уплату за свой труд поцелуй хозяйки. «Мы берем на себя смелость, - пишет исследователь, - что истоки самаркандской легенды о Биби-ханым следует искать в Хорезме: начало было положено в Куня-Ургенче приведенной нами легендой о Тюрябек ханым и мастере Кул Гардане. Мы знаем, с какой легкостью легендарные сюжеты преодолевают расстояния, но для данного случая имелись исторически вполне реальные предпосылки для такой «перекочевки» сюжета» [7, с. 166].

Как известно, строительство мечети Биби ханым в Самарканде велось уже после разорительных походов Тимура в Хорезм. Был уничтожен Ургенч. Множество мастеров в качестве пленных были перевезены в Самарканд. Известно, что именно хорезмские мастера в Шахрисабзе построили дворец Аксарай – резиденцию Тимура. Возможно, они были заняты и на строительстве других сооружений тимуровского времени, в частности соборной мечети Биби ханым. «Возможно, - делает вывод Г. П. Снесарев,- что именно с пленными

ургенчскими мастерами пришли в Самарканд и сюжет хорезмской легенды [7, с. 167].

Имеются и исторические предпосылки оформления сюжета «принцесса и строитель раб» в легенду о Мазлумхан сулу, источником которой, на наш взгляд, является легенда о Тюрябек ханым. Жила историческая Тюрябек ханым в первой половине XIV в., и была женой золотоордынского наместника Кутлуг Тимура [9, с. 169]. Столицей наместничества тогда был г. Куня Ургенч. Это был периодом нового экономического и культурного подъема Хорезма, после разорительных набегов войск Чингисхана. Кутлуг Тимур, наместник Хорезма был приближенным золотоордынского хана Узбека; кроме того он состоял с ним в родстве, и способствовал его восшествию на ханский престол. Женат был Кутлуг на дочери Узбек хана – Тюрябек ханым. Хорезм, еще до монгольского нашествия, являлся центром исламизации степного и полуоседлого населения, и тех племен, которые передвинулись в эти места вместе чингизидами. Велико было значение Хорезма и в исламизации самой Золотой Орды. Немалую роль в этом сыграли Кутлуг Тимур и его супруга. Как отмечают Б. Д. Греков и А. Ю. Якубовский: «Кутлуг Тимур, оказывая поддержку Узбеку, требовал последнего решительного поворота в сторону принятия ислама» [10, с. 266-267]. В самом Хорезме около Куня Ургенча возвышается грандиозный минарет, построенный Кутлуг Тимуром. Его жена Тюрябек в свою очередь, выстроила в Ургенче соборную мечеть. Немало сделали супруги и для суфийских общин. Кутлуг построил две ханаки и учредил в пользу каждой из них вакфы, включающие в свой состав обширные земельные угодья и каналы [9, с. 169-170]. Значит, реальная Тюрябек ханым, супруга наместника Хорезма, несомненно, подвизалась на стезе строительницы религиозных учреждений. Популярность этой женщины – строительницы, меценатки, покровительницы ислама и его институтов, сделали её легендарной личностью еще при жизни, и последующих периодах исторической жизни народов Хорезма.

Много общего в легендах о Тюрябек ханым и Мазлумхан сулу – обе они представительницы правящей верхушки, инициаторы строительства дворца, упомянутого в легендах, в одинаковом положении и рабы строители влюбленных в них. Исходя из этого, и основываясь на специфических приемах народной традиции по варьированию текстов легенд, можно сделать вывод о том, что перед нами два звена непосредственной передачи сюжета «принцесса и раб строитель» от хорезмийцев каракалпакам, то есть легенда о Тюрябек ханым, с некоторыми изменениями, внесенными временем, приурочена мавзолею Мазлумхан сулу. Тюрябек ханым была заменена Мазлумхан сулу, а молодой зодчий Кул Гардан с индийского строителя – на раба. Археолог Г. Хожаниязов, занимавшийся исследованием мавзолея, в 1987 – 1990 годы, отмечает, что памятник в XII – XIII вв. использовался как ханака (общежитие для дервишей), позже к XIV в. его помещения были отведены для погребения, и он был превращен в мавзолей [11, с. 20]. Из этого можно сделать предположение, что погребенная, в мавзолее молодая девушка – прототип Мазлумхан сулу, по легенде нашла приют здесь не раньше конца XIV в., а надмогильный памятник с эпиграфикой был сооружен представителями суфизма. Кроме того, среди каракалпаков и хорезмийцев бытуют другие сходные по содержанию легенды о Тюрябек ханым и Мазлумхан сулу, где молодые женщины после смерти своих возлюбленных, выбирают аскетический образ жизни, посвящая себя служению богу, и проводит оставшуюся жизнь в одиночестве, что присуще идеологии суфизма. Исходя из анализа способов вариации сюжета «госпожа и строитель раб» и вышеизложенных выводов этнографа Х. Есбергенова о причастности личности Мазлумхан сулу к суфийскому течению, можно сделать вывод о том, что погребение молодой женщины, в честь которой назван данный мавзолей было одним из объектов популяризации идеологии суфизма.

Легенды о Тюрябек ханым и Мазлумхан сулу являются не единственными звеньями миграционной цепи сюжета «принцесса и строитель раб». Истоки формирования легенд по нашему исследованию восходят к легенде о Фархаде, приуроченной к остаткам древней крепости Девкала (город великана), имеющей в народе название Сулайман кала. О легенде упоминает в своей работе известный узбекский фольклорист К. Имамов. По легенде, крепость Дев кала была построена великаном по имени Фархад. Он влюбляется в дочь Хорезмшаха по имени Ширин, и посылает своих сватов к её отцу. Не желавший отдать свою дочь за него, хорезмский хан, просить совет у колдуньи (жодугар). Она советует хану поручить деву невыполнимую задачу – построит крепость в центре безлюдной пустыни. Фархад приступает к осуществлению задачи: на плечах таскает из далеких гор камни и приступает к строительству крепости. Когда строительство крепости подходит к концу, напуганный этим обстоятельством, хорезмский хан, опять призывает колдунью на помощь. Она велит хану заколоть 9000 верблюжат, столько же ягнят и телят. Голоса, животных потерявших своих детенышей доходят до крепости, которую строит Фархад. Удивленный он спрашивает у колдуньи: «Откуда этот душераздирающий плачь?». На что злая колдунья отвечает: «Только что умерла принцесса Ширин и все скорбят по ней». Потерявший себя от внезапной вести о

смерти, и не желавший жить без любимой дев Фархад берет, большой камень, и, собрав все силы, швыряет его вверх. Падающий обратно камень попадает прямо на него. Услышав, о произошедшем, принцесса мчится к месту события и застает Фархада мертвым. Не желавшая жизни без любимого Ширин убивает себя ножом [12, с. 69].

О другом варианте легенды, приуроченной к возвышенности Чилпык, связанной с девом упоминает венгерский путешественник Арминий Вамбери, записавший ее во время своего путешествия по Средней Азии. Данная легенда, широко распространена среди народов Хорезма и Каракалпакстана. Она рассказывает о том, что в давние времена это была сильная крепость, и что здесь нашла прибежище некая принцесса, влюбившаяся в раба своего отца; опасаясь мести взбешенного папаши, она бежала сюда вместе с возлюбленным. Чтобы добыть воду, рабу пришлось пробурить гору до самой реки; подземный ход существует и поныне [13, с. 113-114]. Судя по содержанию легенды, зафиксированной Вамбери, она носит несколько сокращенный характер. В другом, полном варианте данной легенды, записанной автором данной статьи от информанта Улбийке (87 лет, жительница г. Нукуса) в ней фигурирует образ дева [14]. В полном варианте легенды, опасаясь мести отца принцессы, никто не хотел приютить влюбленных в своих крепостях. Только один дев, обладатель крепости, на возвышенности Чилпык, осмеливается сделать это, и охраняет влюбленных от их врагов.

Вообще, дев является достаточно широко распространенным персонажем легенд Хорезмского региона, каракалпакский фольклор также изобилует его образами, и он фигурирует в основном в топонимических легендах, рассказывающих о происхождении или строительстве какой-то крепости или искусственно сооруженной возвышенности, служившей по данным исследователей, объектом погребения тел усопших. Это объясняется тем, что хорезмский вариант образа дева, достаточно явно деградирован, то есть отличается одной характерной чертой, интересной в плане генетических связей с древнеиранским пандемониумом. Здесь девы – прежде всего строители городов и крепостей [8, с. 62]. По-видимому, бытование образа дева в хорезмской и каракалпакской легенде уже создавало благоприятную почву для его дальнейшей трансформации в образы строителей рабов; сначала в легенде о Тюрабек ханым в Кули Гардана и после, анализируемой нами легенде о Махлумхан сулу в индийского раба.

Наш анализ легенд (о Мазлумхан сулу, Тюрабек ханым, Фархаде), как звенья одной миграционной цепи, формировавшиеся на основе сюжета «принцесса и строитель раб», может опровергнуть мнении о том что, сюжет легенды о Мазлумхан сулу возник самостоятельно в среде каракалпаков. В пользу нашего вывода о его вариантности с легендой о Тюребек ханым, попытаемся обосновать следующими данными. По рассказам археолога Г. Хожаниязова, принимавшего участие в исследовании мавзолея, в ходе вскрытия могил, принадлежащих, по народным данным, прототипам легенды о Мазлумхан сулу и строителе рабе, действительно были обнаружены останки костей молодой женщины в возрасте примерно 18-20 лет и молодого мужчины 25-30 лет, возраст которых точно показан в легенде. Если будем считать, что случай действительно имел место в реальности, и сооруженный в честь влюбленных мавзолей стал причиной оформления легенды о них, то ряд объективных причин может опровергнуть это. Во-первых, сооружение, воздвигнутое над могилой, является не дворцом, а построено как ханака – общежитие для представителей служащих суфизму. Погребение тел усопших в этих помещениях началось несколько позже. Во – вторых, Мазлумхан сулу – прототип легенды, не могла быть дочерью хана, так как предполагаемый в легенде центр наместничества в тот период находился в Куня Ургенче. Скорее всего, Мазлумхан сулу принадлежала к семье знатного и зажиточного представителя местной знати, только подобная категория людей могла себе позволить погребение в таком роскошном сооружении. В - третьих, если учесть мнения ученых о том, что погребение относится к периоду не ранее XIV в., когда народы Хорезма, в том числе каракалпаки полностью вели, мусульманский образ жизни. Они подчинялись в основном предписаниям Корана, в котором самоубийство являлось страшным грехом, и прославление подобных случаев, не было бы поддержано и традиционной моралью общества того времени. Скорее всего, было бы подвергнуто осуждению. Иное дело обстоит с народной эпической традицией: «слухи» и «толки» о трагедии влюбленных не «отстояли», чтобы оформится в легенду. Со временем этот отголосок из реальной действительности был заменен уже готовой и отстоявшейся в народной традиции легендой о Тюрябек ханым, лишь меняя имена и географическое место.

Заключение.

Подытоживая наш анализ о заимствовании сюжета легенды о Мазлумхан сулу из хорезмского фольклора, подчеркиваем, что данная легенда не является исключительным случаем в цепи заимствований. Каракалпакский народ с Хорезмом связывают многовековые историко-культурные и социально-экономические

отношения, которые оставили свой след в народном творчестве, изучение которого может выявить многие факты заимствования в каракалпакском фольклоре.

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CALCULATION THE LIMIT BEND OF THE SLIDE BEARINGS'S SHAFTS OF THE PLANETARY ROTATION MECHANISM OF CRAWLER TRACTORS WITH CONSIDERATION THE WEAR

Abstract: *The article is devoted to theoretical assessment the wear of slide bearings operating in the time of variable loading, for example of slide bearings of the planetary rotation mechanism of crawler tractors. Investigated the peculiarities of mashine parts's working in dusty surroundings conditions. The analytical dependences allow to calculate the quantity of wear the bearing and the shaft, as well as the size of the gap between they. By comparing the obtained calculate results with the quantity of limited gap, it is possible to determine the service life of the slide bearings as well as the other parts of planetary rotation mechanism.*

Key words: *planetary rotation mechanism, the wear of the bearing, shaft wear, abrasive wear, oxidation wear, fatigue wear.*

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РАСЧЕТ ПРЕДЕЛЬНОГО ПЕРЕКОСА ВАЛОВ ПОДШИПНИКОВ СКОЛЬЖЕНИЯ ПЛАНЕТАРНОГО МЕХАНИЗМА ПОВОРОТА ГУСЕНИЧНЫХ ТРАКТОРОВ С УЧЕТОМ ИЗНОСА

Аннотация: *Статья посвящена теоретической оценке износа подшипников скольжения, работающих при переменном нагружении, на примере подшипников скольжения планетарного механизма поворота гусеничных тракторов. Исследованы особенности работы деталей машин в условиях запыленной окружающей среды. Предложены аналитические зависимости, позволяющие рассчитать величину износа подшипника и вала, а также определить значение зазора между ними. Сравнивая полученные результаты расчета с величиной предельного зазора, можно определить срок службы подшипников скольжения, а также других деталей ПМП.*

Ключевые слова: *планетарный механизм поворота, износ подшипника, износ вала, абразивный износ, окислительный износ, усталостный износ.*

Введение

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Критерием работоспособности опор скольжения являются допустимая температура в рабочей зоне подшипника, минимальная толщина смазочной пленки, допустимый зазор между валом и втулкой, отсутствие заклинивания втулок с солнечной шестерней. Износ втулок больше допустимого значения приводит к перекосу вала и, следовательно, к нарушению режима работы узла.

Температура рабочих поверхностей опор скольжения устанавливается по известной методике при помощи термопары, соединенной с милливольтметром, фиксирующим изменения температуры.

Для определения количества смазочного материала, поступающего на поверхность трения подшипников скольжения планетарного механизма поворота (ПМП) необходимо рассчитать толщину минимального слоя смазочного материала $h_{кр}$ по формуле:

$$h_{кр} = h_{ш} + h_{в} + h_{п} + h_{д} + h_{и},$$

здесь $h_{ш}$ и $h_{в}$, – высота микронеровностей поверхностей шипа и подшипника, мкм;

$h_{п}$, $h_{д}$ и $h_{и}$ – величины, учитывающее соответственно перекос прогиба упругой линии вала по длине подшипника, отклонение от профиля продольного сечения шипа и вкладыша (бочкообразность, седлообразность, конусность), мкм;

Подшипник, работающий в режиме граничной смазки, будет работать устойчиво при соблюдении условия $h_{min} \geq h_{кр}$+2мм.

Для оценки работоспособности подшипников скольжения необходимо установить величину предельно допустимого зазора между парами трения.

Предельное состояние изделия означает полную потерю работоспособности. В таком случае дальнейшая эксплуатация изделия должна быть прекращена.

Предельный износ подшипников скольжения ПМП обусловливает нарушение нормальной эксплуатации машины, появление неравномерной нагрузки на все детали ПМП, деформацию конструкции, которая ведет к тяжелым последствиям отказа этого узла, хотя при всем при этом эффективность работы машины может быть достаточно высокой.

Следует отметить, что в настоящее время нормативы на предельные величины износа для подшипников скольжения ПМП отсутствуют. На практике при каждом ремонте машин приходится определять могут ли изношенные детали продолжать выполнять свои функции, или же их надо заменять. Поэтому весьма актуальной является задача обоснования и установления предельной величины износа подшипников скольжения ПМП.

Для определения предельного значения перекоса $\delta_{пр}$при зацеплении в прямозубых передачах можно воспользоваться расчетом предельной величины перекоса зубьев солнечной шестерни в зацеплении с зубьями сателлита

$$\delta_{пр} = \frac{12138ML}{\pi CB^2 d_a cos\alpha_{on}}, \qquad (1)$$

здесь M – крутящий момент, передаваемый солнечной шестерней, Н·мм;

L – расстояние между опорами, м;

B – ширина зубчатого венца, м;

C – удельная жесткость материала зубьев, Н/м^2;

d_a – диаметр окружности зубчатого кольца, м;

α_{on} – профильный угол производящей рейки в нормальном сечении, град;

Зная величину предельного перекоса солнечной шестерни в зацеплении с зубьями сателлита, можно найти значение предельного зазора подшипников скольжения ПМП. Он определяется с учетом угла перекоса α (рисунок).

Тогда

$$tg\alpha = \frac{\delta_{пр}}{l_3 + \frac{l_2}{2}} = \frac{U_{пр} + \Delta}{l},$$

здесь l – длина подшипника, мм;

l_2 –расстояние от центра перекоса до точки A

l_3 – расстояние от центра перекоса до точки B

$\delta_{пр}$ – предельное значение перекоса, мм

$U_{пр}$– предельный перекос ,мм

Δ – начальный зазор пары трения, мм.

Таким образом, зазор между подшипником скольжения и солнечной шестерней не должен превышать

$$U + \Delta \geq tg\alpha \frac{l_2}{2} = \frac{\delta_{пр} l_2}{2l}.$$

Предлагается методика расчета износостойкости деталей подшипников скольжения планетарного механизма поворота гусеничных тракторов. (Рисунок)

Условия работы деталей машин, работающих в запыленной окружающей среде, характеризуется возможностью проникновения в смазку частиц пыли. В процессе эксплуатации машин абразивные частицы попадают в зазор сопряжения деталей, вызывая тем самым абразивное изнашивание. Нагрузка, действующая на поверхность трения, может передаваться через абразивные частицы при условии, если размеры этих частиц соизмеримы с размером зазора и они взаимодействуют с обеими поверхностями трения. Если силы, действующие на абразивную частицу, достигают критических величин, превышающих предел ее прочности, то частица начинает дробиться (измельчаться). В результате дробления абразивных частиц до размеров меньших значения зазора и толщины масляной пленки, они теряют свою активность и нагрузка в паре трения передается через масляную пленку с равномерным распределением по номинальной площади контакта. В результате, в паре трения преобладает окислительное изнашивание.

Исходя из выше изложенного, можно предположить, что вероятность разрушения поверхностей абразивным β_a и окислительным β_o изнашиванием зависит от поступления и наличия на поверхности трения смазочного материала, так как основным транспортирующим средством абразивных частиц является масло.

Вероятность абразивного изнашивания зависит от времени активности частиц:

$$\beta_{\text{а}} = \frac{t_a}{T}, \quad (2)$$

здесь t_a – время активности абразивных частиц, ч;

T – время работы узла или агрегата, ч.

Согласно [1] время активности абразивных частиц

$$t_a = \frac{\ln \varepsilon}{\omega \ln(1-A)}, \quad (3)$$

здесь ε – концентрация абразивных частиц в масле, %;

ω – угловая скорость, с$^{-1}$.

Для упрощения формулы (3)воспользуемся преобразованием:

$$\text{A} = \frac{n\pi rld_a}{d_{\text{ср}}}, \quad (4)$$

Тогда из (2), (3) и (4) имеем

$$\beta_{\text{а}} = \frac{\ln \varepsilon}{T\omega \ln(1-\frac{n\pi rld_a}{d_{\text{ср}}})}. \quad (5)$$

Объем нормального поступления масла на поверхность трения $q_{\text{н}}$, мм^3/ч, согласно [2] определяется

$$q_{\text{н}} = 0{,}5\omega l d^2 q\psi, \quad (6)$$

здесь q – коэффициент истечения смазки;

ψ – относительный зазор сопряжения;

$$\psi = \left\{\frac{\omega d\mu l[S_o]}{N}\right\}^{\frac{1}{2}}, \quad (7)$$

здесь μ – динамическая вязкость масла, Пуаз;

$[S_o]$ – критическое значения Зоммерфельда [2]

Принимая во внимания (5), (6), (7) из (1) имеем

$$\beta_{\text{о}} = \frac{Tq_{cp}\ln\left(1-\frac{n\pi rld_a}{q_{cp}}\right) - 0{,}5\ln eld^2q\left[\frac{\omega d\mu l[S_o]}{N}\right]^{\frac{1}{2}}}{0{,}5\,T\omega ld^2q\left[\frac{\omega d\mu l[S_o]}{N}\right]^{\frac{1}{2}}\ln(1-\frac{n\pi rld_a}{q_{cp}})}. \quad (8)$$

В условиях трения без смазки или при граничной смазке проявляются усталостные изнашивания. В этом случае

$$\beta_{\text{у}} + \beta_{\text{а}} + \beta_{\text{о}} = 1. \quad (9)$$

Тогда, учитывая (1) имеем

$$\beta_{\text{у}} = 1 - \frac{q_{\text{ср}}}{q_{\text{н}}} = 1 - \frac{q_{\text{ср}}}{0{,}5\,\omega\, d^2\, q\,[\frac{\omega\, d\,\mu l\,[S_0]}{N}]^{\frac{1}{2}}} \quad (10)$$

Износ поверхностей трения U определяется из выражения

$$U = \beta_y U_y + \beta_a U_a + \beta_o U_{\text{о}}, \quad (11)$$

здесь U_y, U_a, U_o – износ поверхностей при соответственно усталостном, абразивном и окислительном изнашивании, мм.

Величины различных видов износа определяются с помощью известных формул профессоров И.В.Крагельского [3], Б.М.Костецкого [4] и У.А.Икрамова [5].

Время разрушения поверхностей тем или иным видом изнашивания обозначим t_y, t_a, t_o, ч, тогда время работы узла $T_{\text{р}}$ определяется:

$$T_{\text{р}} = t_{\text{у}} + t_a + t_o, \text{ ч.} \quad (12)$$

Вероятность усталостного β_y, абразивного β_a и окислительного β_o видов изнашивания определяется из выражений:

$$\beta_{\text{у}} = \frac{t_y}{T_p};\ \beta_a = \frac{t_a}{T_p};\ \beta_o = \frac{t_o}{T_p} \quad (13)$$

Продолжительность абразивного и окислительного изнашивания поверхностей зависит от чистоты масла, поступающего в зазор пары трения. Возможен случай, когда в зазор подшипников скольжения вместе с маслом проникают абразивные частицы, которые до дробления или внедрения их в одну из поверхностей проявляют активность в процессе изнашивания. В этом случае время активности абразивных частиц определяется как

$$t_a = ln\varepsilon/\omega\ln\,(1 - \frac{\pi rld_a}{V_{\text{ф}}}), \quad (14)$$

здесь $\text{V}_{\text{ф}} = \frac{\text{q}_{\text{ф}}}{\text{n}}$ - объем масла, расходуемый за один цикл, мм^3;

q_ϕ – объем масла, фактически поступающего на поверхность трения, мм^3/ч;

n – число циклов нагружения, раз/ч.

Тогда

$$\beta_{\text{а}} = \frac{ln\varepsilon}{T_{\text{р}}\omega\ln\,(1-\frac{n\pi rld_a}{q_{\text{ф}}})}. \quad (15)$$

Если в процессе дробления возникают абразивные частицы, размеры которых не превышают размеры зазора и толщины масляной пленки, то эти частицы теряют свою активность и нагрузка в паре трения передается через масляную пленку с равномерным распределением по номинальной площади контакта. Тогда в паре трения происходит окислительное изнашивание.

Если же в паре трения имеется абразивная частица, размеры которой больше толщины масляной пленки, то в паре происходит не только окислительное, но и абразивное изнашивание.

В этом случае

$$\beta_{\text{а}} + \beta_{\text{о}} = \frac{q_{\text{ф}}}{q_{\text{н}}}, \quad (16)$$

здесь $q_н$ – расчетный объем масла, нормально (максимально) поступающего на поверхность трения, мм^3/ч. Воспользуемся формулами (6) и (7), тогда имеем

$$\beta_o = \frac{T_p q_{\text{ф}}\ln\left(1-\frac{n\pi rld_a}{d_{\text{ф}}}\right) - 0{,}5ln\varepsilon ld^2q\,[\frac{\omega d\mu l[S_o]}{N}]^{\frac{1}{2}}}{0{,}5T_p\omega ld^2q\,[\frac{\omega d\mu lS_o}{N}]^{\frac{1}{2}}\ln\,(1-\frac{n\pi rld_a}{q_{\text{ф}}})}. \quad (17)$$

Имея в виду $\beta_{\text{у}} + \beta_{\text{а}} + \beta_{\text{о}} = 1$ и учитывая (13) и (14) получим

$$\beta_{\text{у}} = 1 - \frac{q_{\text{ф}}}{q_{\text{н}}} = \frac{0{,}5\omega l d^2 q\,[\frac{\omega d \mu l [S_O]}{N}]^{\frac{1}{2}} - q_{\text{ф}}}{0{,}5\omega l d^2 q [\frac{\omega d \mu l [S_O]}{N}]^{\frac{1}{2}}}\ . \qquad (18)$$

По результатам анализа и предварительных расчетов установлено значение предельного износа вала и подшипника скольжения ПМП, а также допустимые значения предельного зазора между ними. Предельное значение зазора определено с учетом перекоса солнечной шестерни, приводящего к проворачиванию втулок подшипников скольжения. Сравнивая полученные результаты расчета с величиной предельного зазора, можно определить срок службы подшипников скольжения, а также других деталей ПМП.

Обозначения

$h_{\text{кр}}$ – толщина минимального слоя смазочного материала, мкм;

$h_{\text{ш}}$ и $h_{\text{в}}$ – высота микронеровностей поверхностей шипа и подшипника, мкм;

$h_{\text{п}}$, $h_{\text{д}}$ и $h_{\text{и}}$ – величины, учитывающее соответственно перекос прогиба упругой лини вала по длине подшипника, отклонение от профиля продольного сечения шипа и вкладыша (бочкообразность, седлообразность, конусность), мкм;

M – крутящий момент, передаваемый солнечной шестерней, Н·мм;

L – расстояние между опорами, м;

B – ширина зубчатого венца, м;

C – удельная жесткость материала зубьев, Н/м^2;

d_a – диаметр окружности зубчатого кольца, м;

α_{on} – профильный угол производящей рейки в нормальном сечении, град;

T – время работы узла или агрегата, ч;

ε – концентрация абразивных частиц в масле, %;

ω – угловая скорость, рад/с;

n – частота вращения, с$^{-1}$;

r – радиус вала, мм;

l – длина подшипника, мм;

α – угол перекоса, град;

U_{cp} – средняя величина износа втулки, мм;

l^l – расстояние от центра до наружнего торца подшипника;

l_1 – расстояние от центра до внутреннего торца подшипника;

l_2 – расстояние от центра до середины подшипника

d_a – диаметр абразива, мм;

t_y, t_a, t_o - время разрушения поверхностей усталостным, абразивным или окислительным изнашиванием, ч;

q – коэффициент истечения смазки;

ψ – относительный зазор сопряжения;

μ – динамическая вязкость масла, Пуаз;

$[S_o]$ – критическое значения Зоммерфельда;

U – износ поверхностей трения, мм

U_y, U_a, U_o – износ поверхностей соответственно при усталостном, абразивном и окислительном изнашивании, мм;

$V_{\text{ф}} = \frac{q_{\text{ф}}}{n}$ - объем масла, расходуемый за один цикл, мм^3;

q_{ϕ} – объем масла, фактически поступающего на поверхности трения, мм^3/ч;

n – число циклов нагружения, раз/ч;

$q_н$ - расчетный объем масла нормально (максимально) поступающего на поверхность трения, мм^3/ч.

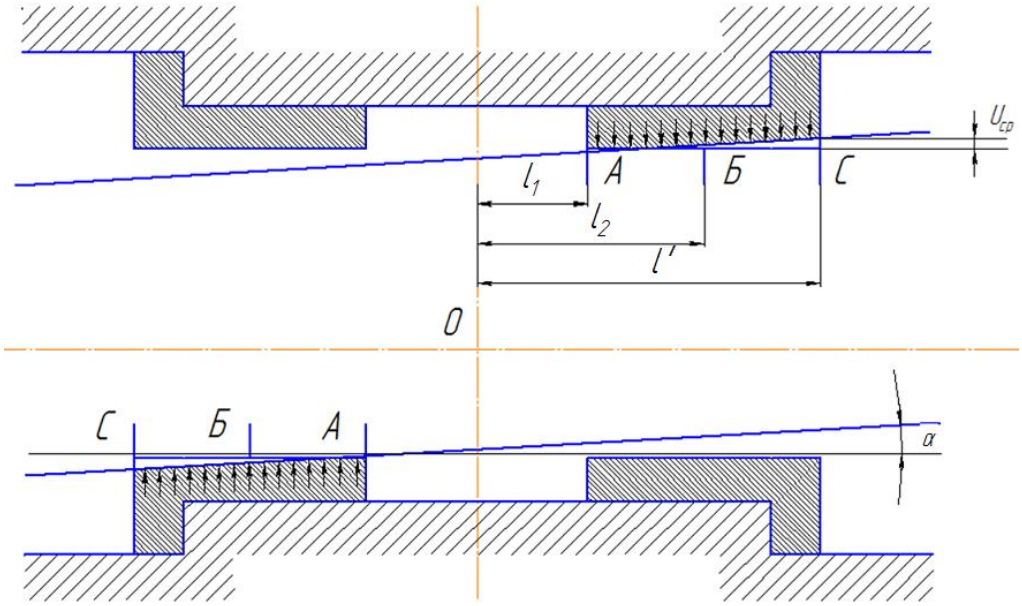

Рис. Моделирование вероятности перекоса солнечной шестерни:
α – угол перекоса, град; U_{cp} – средняя величина износа втулки, мм;
l^I – расстояние от центра до наружнего торца подшипника;
l_1 – расстояние от центра до внутреннего торца подшипника;
l_2 – расстояние от центра до середины подшипника;
А, Б, С – точки опор подшипника

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FROM THE HISTORY OF ANCIENT URBANIZATION PROCESSES (on the example of North-Eastern territories of Central Asia)

Abstract: *It is stated the history of the old urbanization process in this article. There it is pointed the north-east territories of Central Asia The author gave conclusions on comparison analysis of archeologic studies.*

Key words: *urbanization process, archeologic studies, Central Asia, urbanization problems, oasis of Keles, Kurama mountains, the culture of burghulik, nomadic tribes, theculture of Chauhugau, the culture of Ustrushona.*

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Introduction

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The level of objectivity and reliability of the reflection of the research results, the formation of concepts and approaches in the study of cities in the region, the collected information and their introduction into scientific circulation cause a thorough study of the historiography of archaeological research on the issue of ancient urbanization in Central Asia, the history of the theory of formation and development of cities in the region, as well as the historiography of the interpretation of civilization of ancient cities in Central Asia.

In recent years, because of special research, conducted in connection with the anniversaries, associated with the historical dates related to the emergence of many cities and new inventions, interest in the problems of urbanization of Central Asia has increased; the history of various ancient cities has been highlighted. The obtained evidence was turned into an actual task in the study of the historiography of Central Asia, in the generalization of the scientific approaches and concepts. The historiographical analysis of the scientific literature shows that the history of the study of the problems of ancient urbanization processes has not been studied separately.

Initial works on the problems of urbanization and early statehood of Central Asia were created in the second half of the XIX-early XX century, based on written sources. In the twentieth century, many archaeological studies were carried out in the first cities in the region and statehood periods (Bronze and Iron ages), the opportunity to compare the archaeological materials with the data of written sources emerged. Despite the fact that on the basis of rich archaeological material, fruitful work was carried out on the study of urbanization processes of particular importance in the history of Central Asia, including the statehood of Uzbekistan – the stages of early cities, however, the history of the issue as a special topic has not been studied. This circumstance is sharply manifested in the analysis of the processes of ancient urbanization and generalization of the results of this analysis.

The ancient culture of urban development in Central Asia was formed in stages, in certain periods of socio-economic progress. The development of handicrafts and agricultural industries in these areas created conditions for the strengthening of residential areas, as well as caused the need to regulate the rules of management of a particular tribe, created the basis for the emergence of cities. In addition, the location of Central Asia in the center of Eurasia and the natural conditions of these territories since ancient times have caused its uneven and peculiar historical

development. From this point of view, urbanization processes in the northeastern regions of Central Asia, where relations originatedbetween the peasant and livestock tribes, proceeded rather late[1]. This period is associated with the influence of the ancient era and Hellenistic traditions.

The lands of the oases of The Middle Syrdarya and its right tributaries - the Chirchik and the Akhangaran rivers are surrounded on three sides by mountain systems – Western Tien Shan, Chatkal and Kuramin ridges, located in a shape resembling a horseshoe. At the same time, during the period of prosperity, the territory of these lands was not limited to the current Tashkent oasis. In the North, these lands included not only the Keles oasis, but also extended further to north to the oasis of Aris and reached Otrar[2].

The population living in these areas in the first Millennium BCare represented as nomadic tribesin some sources. However, residents who settled in the villages of Akhangaran and Chirchik oases of the Tashkent valley engaged in agriculture and was consideredas a carrier of the “burgulik” culture. This culture coexisted with other cultures in the West to the southern mountain ranges of the Zeravshan, in the East with the culture of Daohugou opened on the territory of Eastern Turkestan, on the territory extending all the way to China, and this fact shows that these regions co-existed in conjunction with each other since ancient times.

At the last stage of the burgulikculture,a new town called Kankaappeared, which was located in the South-West of the oasis, in the basement, which had a strong fortress, as well as a tower in the form of a convex circle. The plan and size of the bricks, the styles of fortifications, the shape of the towers and forts, the pottery of the townspeople – all this finds its correspondence in the ancient agricultural culture, the architecture of the ancient West or the regions of the Hellenistic period, primarily in the architecture of Sogd[3].

Experts on urbanization of Sogdin Samarkand M. Isamiddinov and K. Rapen, having studied the stages of development of technology of manufacturing of bricks, say what shape of this item, used in Kanke, belong to the Hellenistic period. The evolution of the style of construction of Khorezm in ancient times suggests a similar chronology[4].

Speaking moreabout ancient periods, E. E. Kuzmina, analyzing the objects and products found in the Tashkent oasis, especially emphasizes the versatile and continuous connections of the oasis, in particular with the tribes of the Aral Sea, southeastern Caspian, Central and South-Eastern Kazakhstan, more precisely, with the steppe tribes of the Bronze Age[5].

At the same time, cultural monuments associated with the transition of neighboring cattle breeders and farmers on the territory of Chirchik and Akhangaran oases were discovered. Since the artifacts of this culture were first discovered on the Bank of Burgulik-say, the right tributary of the Akhangaran river, in its middle reaches, it is for this reason that the culture found received the above - mentioned name “burgulik” culture. To date, the monuments of this culture have been found in more than 20 settlements on the foothills of the oasis, in the northeastern part of it. Among the monuments of basements relatedto burgulik culture, they found numerous items (mainly pottery) of material culture. M. Duque, claiming that they have similarities with artifacts from the upper layers of Asdayin southern Turkmenistan, Tillatube in Afghanistan, Miradi, Kuchuktepa, JarkutanSurkhan oasis, believes that they can relate to the IX-VII centuries BC[6].

Items of burgulikmaterial culture have a relatively greater similarity to the culture of Ustrushana in the West, i.e. with the culture of Nurtube. In Nurtube, along with the strong architectural structures were found the basement, hand-made pottery, on the basis of comparative analysis, they belong to the VII - III centuries BC.

Similar objects of material culture were also found in other monuments of ancient Ustrushana. For this reason, the left Bank of the SyrdaryaRiver has defined a culture of Nurtube. According to Gritsina, the specifics of the first stage of this culture is considered to be the simultaneous presence of dwellings in the form of semi-basement and grandiose buildings built of pakhsa (clay) and raw brick[7]. All this testifies to the connection of local tribes with the Achaemenid culture through Marakand, which influenced the urbanization processes in the northeastern territories.

Artifacts related to the burgulik culture (dwellings, pottery) were also found in Sogd. The researchers emphasize quite a significant resemblance in the forms of dwellings, the features of the cultural layers, the composition and the form of pottery, made by hand and with the patterns found in the monuments Kumtube in Sogd and Chach in Tuyabogiz. This fact indicates the similarity of the burgulik culture with the monuments of the lower layers of Sogdiana.

Studies conducted in recent years, provide an opportunity to justify the connection of the burgulik culture with the Eastern territories, in particular with the Northern lands of Eastern Turkestan. The chronological framework for the creation of monuments discovered as a result of these studies include the X - VI centuries BC. The sites are mostly cemeteries-burial mounds. If hand-made potteryare mainly foundamongthe findings from cemeteries, burial mounds, numerous remains of clay, straw and wheat, and sicklesare foundon flat terrain. Some of the founditems are similar to the dishes of burgulik culture, and the patterns and ornaments on this dish are similar to their equivalents of Chust culture in Namangan[8].

All of the above indicates a broad cultural ties and strengthening the process of sedimentation in the way of life of nomadic tribes. It is necessary to emphasize that in the East nomadic signs prevail, in the Tashkent oasis – the subsidence based on agriculture and artificial irrigation, in the southern and Western regions, Sogd and Bactria - nomadic signs, and finally, within the state of Achaemenids - active relationship of these two lifestyles.

In a word, the burgulik culture widespread in the northeast of Central Asia, with all elements inherent in it: architectural and construction traditions, the main Potter's complexes, technology of pottery production and complexes of bronze and iron subjects, according to the majority of archeologists belongs to the framework of IX - IV-III centuries BC.

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THE CAMPAIGN OF ALEXANDER BEKOVICH-CHERKASSKY IN THE WORKS OF V.V.BARTHOLD

Abstract*: the article is devoted to the historiographical analysis of V.V.Barthold's work on the history of one of the first military campaigns of Russia in Central Asia – the campaign of A.Bekovich-Cherkassky. To analyze the issue fully it is given a brief story about the history of A. Bekovich-Cherkassky's campaign.*

Key words*: Alexander Bekovich-Cherkassky, V.V. Barthold, Peter I, Shirgazi Khan, I.D. Bukhgolz, B.V. Lunin, Russian Empire, Khiva khanate, map of the Caspian Sea, sources, historiography.*

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Introduction

The famous expedition of Alexander Bekovich-Cherkassky is inscribed in the history of Uzbekistan and the whole of Central Asia, the results of which for many years influenced Russian politics in Central Asia in the 18th and 19th centuries. By the May decree of Peter I of 1714 [17], it was decided to equip two expeditions to study the location of Central Asian sand gold and to find ways to India. One of them is the expedition of I.D. Buchholz [9, P. 42-44; 16, P. 427-429] and the other is the expedition of A. Bekovich-Cherkassky. It should be noted that both of them pursued strategic and political goals. Thus, the decree of Peter I became the legal basis and a kind of starting point in the organization and implementation of the expedition of Alexander Bekovich-Cherkassky to Central Asia.

Materials and methods

In the course of our narrative, it seems appropriate to pay attention to the march itself. The objectives of the Alexander Bekovich-Cherkassky campaign were specifically formulated in two royal nominal decrees, dated May 29, 1714 and February 14, 1716, and were carried out in three stages [8, 70-76]:

1. At the first stage, the Sea (Caspian) expedition was organized (November 1714 - October 1715), during which topographical and reconnaissance works were carried out, and the first scientific map of the eastern shores of the Caspian Sea was created;

2. At the second stage, another Marine (Caspian) expedition was formed (September 1716 - February 1717), the result of which was the construction of fortresses at Cape Tyub-Karagan, in the Alexander-Bay and in the Gulf of Red Waters

3. The third stage involves the implementation of the Khiva campaign (June-August 1717).

It should be noted that the first and second naval (Caspian) expeditions carried reconnaissance and research (geographic) targets. They were conducted on the northeastern and eastern shores of the Caspian Sea and, in general, led to significant successes in terms of geography and topography. Based on the data obtained during the expedition of A. Bekovich-Cherkassky, the first scientific map of the Caspian Sea was created (This map (No. 641) is stored in the Cartographic Publications Foundation of the Library of the Academy of Sciences of the Russian Federation in St. Petersburg. [10, 67, P. 115-116; 12, P. 97; 14, P. 13-14].

A. Bekovich-Cherkassky presented this map to Peter I in February 1716 while meeting him in person in the town of Libava (modern city of Liepaja, Latvia). Having presented it to members of the Paris Academy of Sciences, Peter I received positive reviews, and was elected its member [11, P. 154-158]. In February 1717, preparations began for the last and most important stage of the expedition - the overland march to Khiva. But, as is known, the expedition to Khiva in 1717 ended in regret. Khiva Khan Shirgazi Khan divided the troops of A. Bekovich-Cherkassky into five parts with dexterity, thereby weakening them. In August 1717, Shirgazi Khan ordered to smash or capture A. Bekovich-Cherkassky's troops, which was done. A. Bekovich-Cherkassky himself and many commanders of military units were killed. Later, In September 1717, Peter I learned that the expedition had been destroyed, and his plans for Central Asia had to be postponed [9, 48]. After that, he did not take any further action in this direction. The destruction of the expedition and the death of A. Bekovich-Cherkassky himself even became the reason for the appearance of the saying "disappeared like Bekovich," that is, without a trace. And the first scientific map of the Caspian Sea was lost in the archives for a long time geographical component of the expedition was the reason for studying it in the historical and geographical perspective. The first historical works relating to the history of the expedition, appeared in the second half of the XVIII century. Later, the history of this campaign became the object of study and was reflected in numerous historical works on the history of Central Asia. In this regard, it is worth noting the contribution of Russian Orientalists to the study of this topic.

For, as claimed by the domestic historiographer Boris Vladimirovich Lunin: "The first successes in the development of historical oriental studies in the late XIX - early XX centuries belong to V.V. Grigoriev, N.I. Veselovsky and, especially, V.V. Barthold [1, P. 288].

Vasily Vladimirovich Barthold (1869–1930) - Russian and Soviet orientalist, Turkologist, Arabist, Islamic scholar, historian, archivist, philologist; one of the founders of the Russian school of oriental studies. V.V. Barthold, in contrast to other Russian historians, used in his studies, apart from Russian sources, also of Eastern and European origin.

Describing the activities of V.V. Barthold, B.V. Lunin noted that: "the strongest side of Barthold's scientific activity was his inherent broad, deep and in some special questions almost all-encompassing erudition.

The combination of high consciousness of their responsibility to science with the qualities of a slow, thoughtful and cautious researcher, who was accustomed to carefully weigh and think through every formulation, every look, all this gave V.V. Barthold is an academic, in the best sense of the word, character. His works acquired the importance of the most important publications in the issues studied and often served as irreplaceable aids, starting materials for many dozens of researchers" [13, P. 209-210].

In the writings of V.V. In addition to the fundamental questions of the history of Central Asia, Barthold also finds narrow themes. One of these topics is the history of the campaign of A. Bekovich-Cherkassky. V.V. Barthold explored such problematic moments in the historiography of this issue as the goals and objectives of the march, the number of troops participating in it, the change of the channel of the Amudarya, the results of geographical research and the relationship of Alexander Bekovich-Cherkassky with the lieutenant Kozhin Cherkassky [8, P. 70-76; 2, P. 93-99; 3, P. 47-61].

In several works of V.V. Bartold this topic was considered in the context of other topics [4, P. 547-605; 5, P. 651-776; 6, P. 400-413]. But in detail the history of this campaign was reflected in his work "The History of the Study of the East in Europe and Russia" [7, P. 199-484]. So V.V. Barthold analyzed the causes and objectives of the organization of the campaign of Alexander Bekovich-Cherkassky with the involvement of various sources. At the same time, unlike other Russian historians, he specifically pointed out the conquest of the Central Asian khanates and the change in the course of the Amu Darya [7, P. 393] as the goals of the campaign.

Developing the question of the goals of the campaign of Alexander Bekovich-Cherkassky, V.V. Barthold referred to the official Khiva historiography - the work of Shirmukhammad Muniz and Muhammad Rizo Agakhi - "Firdaus al-Iqbal". He noted: "The Khiva story does not mention the plan to divert water to the Amu-Darya. According to the Khiva historian, the detachment was aimed at conquering the Khiva khanate for the gold mined in the Sheikh-Jely mountains" [7, P. 394; 15, P. 69].

V.V. Bartold in his work gives information about the three fortresses built by members of the expedition, and also indicates their fairly accurate location. According to his comments: "In 1716, Bekovich traveled across the Caspian Sea again and built fortresses in three places: at Tup-Karagan between Alexander Bay (Bekhtir Liman) and Kinderley Bay (this place is also marked on modern maps as Devlet-Girey) and Red Waters, i.e. at the Balkhan Bay (where the city is now Krasnovodsk), near the place where the Uzboy - the dry Amu-Darya river flows into the Caspian Sea" [7, P.394].

Unlike other historians, the history of the campaign in the description of V.V. Barthold is full of information and details. In addition, he used memoirs in his work (memoirs of participants in the march), foreign literature and archival sources. Undoubtedly, an important factor for recreating an adequate historical picture of the campaign was the involvement of Khiva sources in the analysis. It is

precisely such comprehensiveness in the coverage of sources, in our opinion, that VV. Barthold deal with the problem from different angles.

It is worth noting that for many of the works of V.V. Barthold is characterized by such an objective approach in the study of many historical issues. In this respect, the assessment given to the works of V.V. Bartold B.V. Lunin: "With regard to Barthold, we can say with confidence that he did not inherently have any kind of admiration for the East, nor a scornful attitude towards him" [13, P. 211]. These words B.V. Lunin sought to show the objectivity of the works of Barthold in the study of the history of CentralAsia.

Conclusion

In conclusion, it can be stated that the works of V.V. Barthold on the history of the campaign of Alexander Bekovich-Cherkassky is distinguished by its objectivity, a peculiar method of developing various sources of interest on the topic of interest. Of course, until today, a lot of research has been written in Russia, Uzbekistan, and other countries on the history of the campaign, but research by Academician V.V. Barthold on this issue is still relevant and has not lost its value. The use of these works allows to fill gaps in the study of the history of the campaign of Alexander Bekovich-Cherkassky in Khiva.

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NOMINATION IS AN IMPORTANT DIRECTION IN THE PERSONNEL POLICY OF THE SOVIET GOVERNMENT IN KARAKALPAKSTAN IN THE 20-30 YEARS OF THE XX CENTURY

Abstract: *the article, based on archival materials, reveals a little-studied problem in domestic history, as a promotion policy, which was an integral part in the system of training party, Soviet, and economic cadres of the Soviet government in Karakalpakstan.*

Key words: *Soviet power, personnel policy, totalitarianism, farm laborer.*
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Introduction

The less studied problem in the history of Karakalpakstan is the policy of nominating workers and dekhkans to leading and responsible posts. This was an important part of the personnel policy during the formation and strengthening of the Soviet totalitarian political system. Having become part of the system of selection and training of managerial personnel, promotion made it possible in 1920 - the first half of the 1930s to solve the problem of filling managerial positions with employees who were not only able to carry out the management process, but also shared Bolshevik ideas about building a communist society.

Materials and methods

Since 1924, the nomination has become one of the main directions of the personnel policy of the state. The XIII Party Congress in January 1924 and then the XIII Congress of the RCP (b.) In May 1924, for the first time placed nomination in a number of paramount tasks for party, trade union and economic bodies. The 13th Congress called the young party members who joined the RCP (b.) During the "Leninist draft" (1924), and Komsomol activists, first nominated for more complex leadership work within the RYCL, and then party, trade union, and Soviet, as additional sources of nomination. work.

The Decree of the Congress noted that when nominating workers for public service they should not take into account their unpreparedness, level of education. The main thing is not to make them specialists in the field of public administration, but that, having received party education, “in all their work they should draw a common line and be under it (*the party – R.B.*) with full and direct leadership” [1, P. 40].

The organizational distribution department of the Kazkraykom sent a directive letter to the Karakalpak regional committee as follows: “Taking into account the insufficient communist layer in the institutions of your region and the difficulties in selecting workers from the Kraykom, the Organizational and Distribution Division of the Kazakh Regional Committee of the All-Russian Communist Party of Bolsheviks (KazKraykom of the All-Union Communist Party (b)) offers you to pay due attention to the staffing of regional and district apparatuses of the most important branches with communists, by means of promotion and Karakalpak. Along with this, it is categorically proposed to stop the secondment of the response of workers to the disposal

without the prior consent of the Kraykom, which took place in the past in spite of the Kraykom circular of 28 / X 25g No. 226/1" [2].

Issues of nomination were given attention at the 1st Amudarya Regional Party Conference. So, the adopted resolution says the following: "The First Regional Conference of the heads of the organizational and instructive departments of the regional and district committees of the Communist Party considers one of the most important tasks of the party at present to involve the best elements of the non-partisan dehkan and working masses in active work and therefore proceeding immediately to implementation of the specified task, the party organization should take the following for leadership:

1. It is necessary to achieve not only a massive increase in confidence in the Soviet regime, but also really an increase in capable practitioners, organizers in the Soviet apparatus, who are directly familiar with the living conditions and needs of farmers and workers.

2. The main source from which these forces should be drawn are the proletarians who are honest in fulfilling their class duty and the peasants, unconditionally loyal to the Soviet regime, who prove this devotion by actively defending it, skillful organizers and enjoying influence among the best part of the population of the village and village" .

Nevertheless, in 1925-1926 in Karakalpakstan, the regional committee did not pay enough attention to the nomination of new personnel. Comprehensive instructions about who should be considered a nominee were not given, and therefore the process of accounting for nominees has not been developed. Grassroots, and partially regional authorities considered all service personnel of institutions, including janitors, watchmen, couriers, etc., as nominees, and some institutions considered nominees as workers who had held senior positions for many years.

For example, on the list of secretary of the Chimbay district committee of the party, Mukhsin, among the nominees for 1925-1926 out of 105 people, 38 dehkans and farm laborers, 27 clerks, 17 police officers, 14 watchmen, 5 couriers, 4 teachers were listed [3].

Most of the nominees were not prepared for work in the field of state administration, and therefore experienced certain difficulties in fulfilling their direct duties. The main objective of nomination was "improving the state apparatus and bringing it closer to the actual needs of workers and dehkans." By "improving the state apparatus" was meant updating it by dismissing "socially-alien" specialists who were also considered to be carriers of bureaucratic experience and old management traditions, and nominating for vacated positions of workers and dehkans, which should have contributed to the creation of new cadres of Soviet leaders and the eradication of bureaucracy in the Soviet administrative apparatus.

Deficiencies identified in the course of the surveys were typical of the personnel work of that time. They consisted of the following: 1) the concentration of almost all the activities of promotion in party organizations, 2) the formal attitude of trade union organizations to this matter, as well as the heads of departments and institutions, 3) the insufficient promotion of workers at the lower levels of administrative apparatuses, the lack of developed lists of posts for which the nomination of workers and peasants should have been regularly held. As a result of this, mechanical nominations of workers to any vacant positions took place, nominees often found themselves unclaimed in new jobs.

The Third Regional Party Conference (October 26-30, 1927) laid the foundation for a systematic nomination work, pointing out the need for "nominating a new asset from the dekhkan masses," however, the question of the progress of the nomination for party, Soviet and union lines did not make precise provisions in the nomination directive. The question was placed in the Resolution "On measures to improve information and statistical work"

In 1927, nominees took up the posts of heads of land and water departments in Turtkul, Khojeyli, Chimbay, Kungrad districts, the chairman of the Kungrad district executive committee, the chief of police Khojeyli, and people's judges. 35 nominees: 12 Karakalpaks, 11 Uzbeks, 8 Kazakhs, 2 Turkmens also occupied high positions in district institutions [4].

The campaign "Sovetization of the "aul" and the "kishlak" (village)", launched in the spring of 1928, and the ensuing activities, such as "organizing, economically putting the poor on their feet and rallying the party around the party, opposing the poor to the growing activity of rich men, "ishans" and clergy" were associated with a significant "refreshment" of the administrative apparatus in the village and "aul". The party made nomination work dependent on organizational conclusions arising from the need to "refresh" the Soviet and party apparatus. At the initiative of the commissioners, experienced personnel in the "aul" and the "kishlak" (village)councils were often replaced by active poor people, farm laborers and middle peasants, potential allies of the new government, since the new government provided them with great career opportunities. These new leaders "faithfully" began to serve the Soviet government, tried to comply with its directives. Nomination was also practiced in cases of urgent need, when "obviously hostile elements" were found in the Soviets, the Koshchi Union, farm laborers, and cooperatives, which hindered by their actions the accounting of taxable objects.

By August 1, 1928, 63 people had been nominated in Karakalpakstan, of which 10 were workers, 41 were farm laborers, 9 were poor and 3

were middle peasants. Out of the total number of nominees (63), 7 people were nominated for work on a regional scale, district - 27, “aul” - 29. According to nationality, they were divided: 24 Karakalpaks, 13 Kazakhs, 9 Uzbeks, and 17 others. : members and candidates of the AUSP (b) - 36, members of the AULYCL - 7, non-partisan - 20 [5].

The regional committee bureau gave clear instructions on who should be considered a nominee. It was recognized that the nominees were workers and dehkans nominated for independent work as managers, chairmen, members of the boards and presidiums of institutions of “aul”, regional and regional scales. The nominated persons should have been registered with nominees for 5 years, after which they should be removed from the register of nominees. The main role in the nomination of dehkans and farm laborers belonged to the Soviets, the Koshchi Union, cooperation and party organizations of “auls” and villages.

In 1928, among the nomination events, the regional party committee prepared 195 applicants to higher educational institutions in Russia, Kazakhstan and Uzbekistan, of which 41% were Karakalpaks, 37% were Kazakhs, 12% were Uzbeks, 3.6% were Tatars and Bashkirs, Turkmens - 2.5%, Ural Kazakhs - 2.5%, others - 1.4%.

The head of the organizational department of the regional committee of Dvornikov and the head of the information department Zhuravlev on August 28, 1928, in a letter to the Kazakh Kraykom, analyzing the status of the nomination in Karakalpakstan, noted the following shortcomings: lack of planned work; insufficiently clear presentation of the campaign; inattention to nominees; lack of educational work with nominees; fear of promotion; delayed nomination of women; passivity of trade unions and the Koshchi Union.

To move from the random nature of the nomination to systematic work, in the interests of improving the Soviet and economic apparatus, Dvornikov and Zhuravlev proposed working out a work plan for nomination and accounting. It was proposed to establish a record of not only the number of nominees, but also their quality; to develop a list of posts to be replaced; to draw attention to the need to nominate new cadres of workers from indigenous nationalities by popularizing the ideas of nomination; to fight in every way with those who, under the flag of "business" interests, are trying to resist ongoing activities [6].

In total, as of January 1, 1929, 121 people were nominated for nominees in the Karakalpak Autonomous Region, 21 of them worked on a regional scale, 54 in the district, and 46 in the aul. According to their social status, they were distributed as follows: workers - 18, farm laborers - 65, poor people - 24, middle people - 9, office workers - 6. By nationality, nominees were distributed as follows: Karakalpaks - 47 (38.8%), Uzbeks - 28 (23, 1%), Kazakhs - 22 (18.2%), others - 7 (19.9%).

The nomination policy was accompanied by a policy of “purging” the Soviet apparatus. So, the Fifth Plenary Session of the Central Committee of the All-Union Communist Party of Bolsheviks, held in November 1929, supplemented the Decree “On the inspection and cleaning of the Soviet apparatus” of September 12, 1929 with the following clause: “Inspection and cleaning of the Soviet apparatus ... link with the preparation and nomination of new cadres of workers and young specialists; the work and refreshment of the apparatus should take place along the lines of more decisive promotion (primarily from the composition of working teams and sections of councils), the establishment of a firm nomenclature of positions for nominees, with the latter being placed in compact groups inside the apparatus”.

By the beginning of the 1930s, a certain practical experience of nomination was accumulated. He identified the priority areas of this policy. The predominant nomination of communists took place with a minimal number of non-party workers. This was also one of the manifestations of the Bolshevik policy of "ideological and class approach." The selection of nominees was carried out primarily on social-class grounds. Activities for organizing, conducting and monitoring the nomination were concentrated in party committees. Certain forms and methods of nomination were also developed, based on taking into account the presence and shortage of workers in various branches of management.

The party’s regional committee developed a plan for the mandatory nomination of 100 “root people” (the so-called nominees from indigenous nationalities) for responsible work in regional Soviet, economic and cooperative institutions at the rate of 60 people. Of the 100 nominees, 20 should stand out among women. All had to be literate in the language of the local population [7]. The nomination was carried out at the expense of the aul asset of the poor, middle peasants, with at least 3 years of Soviet and economic experience.

Out of 100 nominees, as of July 15, 1931, 44 nominees worked in all regional institutions, of which 5 were women. The largest number of nominees were Karakalpaks - 17 people (3 women), Kazakhs - 11, Uzbeks - 9. According to their social composition, they represented: 24 workers and farm laborers, 20 poor and middle peasants [8].

According to archival data, the nomination continued in 1934. So, on May 9, 1934, the CEC and the CPC of the Karakalpak Autonomous Soviet Socialist Republic adopted the Decree “On work among nominees”, a command was given to the districts to implement the “nomination-100” plan: 20 women, 80 men, 43 Karakalpaks, 17 Kazakhs, 15 Uzbeks, 5 Turkmen, 6 Urals [9].

Conclusion

In conclusion, making a general conclusion, it must be emphasized that the nomination policy was carried out to achieve the main goal: the formation of a certain social group, which the government could rely on during the upcoming economic and political transformations. The presence of nominees in all areas of the administrative apparatus and their placement inside it in compact groups allowed the authorities to establish strict political control over it.

The period from 1932 to 1936 was the final stage of the promotion policy. In subsequent years, the promotion of rank-and-file workers to senior positions did not stop, but its initial character gradually changed. An employee who performed a small managerial job, after a while was appointed to a similar in nature, but more responsible position. A certain continuity remained in the work, and in the nomenclature of posts the gap between them was insignificant.

However, this approach laid the foundation for deep deformational social processes. The entry into the power structures of poorly educated and even illiterate workers and dehkans, granting them great administrative rights and material privileges, as well as the assumption that the construction of a new society will take place in an acute class struggle using the instruments of class violence, laid the foundation for the formation of command and administrative methods the work of the party, Soviet and state apparatus.

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THE HISTORY OF COMMERCIAL ECONOMICAL – CULTURAL RELATIONS OF TASHKENT OASIS

Abstract: *This article is for researching and analyzing, on the basis of Tashkent oasis the early Middle Ages economic –cultural relations. Tashkent oasis' significance of the regional and international commercial relations is given on the basis of literatures for analyzing the scientific facts.*

Key words: *Choch, Sugd, Avesto, culture, Iloq, Chotkol, Kurama, Koramozor, Yaksard, Zarafshon, urbanization, Kang, Lashkarak, Qizilolma, Kukrel, Shovgaz, Feruzakon, Gulduran.*
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Introduction

The developing of peasant culture in Tashkent oasis, the expansion of craft industries, spontaneously gave good grounds for increasing the commercial, economic, cultural relations.

The social political relations which appeared at the old periods in the territory of China and eastern Asia of Central Asia with other countries, especially economic- cultural relations in the 7-8 centuries became on the top of relation. In this period, the imported and exported goods into Tashkent oasis, to kind and classify them at the same time with developing of craft industry gave possibility making volt –face of social economical in Tashkent oasis' social life., to make a new social relation and also (more while) the base of governing also gave a chance to research different countries cultural connection with each other.

Trade development beginning from the early ages at the society was formed and increased as an economical base and determined the cultural development as a kind of economy. If we analyze the historical sources in Old East at the 1-st quarter of II-millennium before the century, we'd observe the formed rules according the criteria of trade process. In particular. In Xamurapi's rules the trade works were regulated on the basis of exact rules.

Materials and methods

At the 100 –chapter of the code of laws, a whole –sale merchant "Tamkar met the requirements of Sham alum with raw materials. Shamalum sold it. All the benefits got back to Tamkar. Shamalum got money for working day." At the same time permanent trade works focused on government's attention and appeared serious problems were solved in the temple of God Shamash. The trade was one of the main economic supports, beginning from the old times it developed as a separate production economy. This process began in our region in the middle of the 1-st millennium before the era and had developed in other historical periods. Reaching the 1-st middle ages merchants were divided into two types: we can observe merchants occupation foreign trade and inside, around the regional area.

In the life style of the society in Old East civilization which was a part of central Asia, the trade was the main economy. If we mean about the legalization and saving of the trade process, in "Avesto" it informs that merchants together with peasants were divided into different types. The local

people in the territory of Central Asia were mentioned that in trade they were as skillful merchants. They played a great role in cultural connection of Great Silk Road net. The occupation of transcontinental trade connections of Tashkent oasis, were not left aside the attention of not only regional but foreign specialists, especially by English scientist Stein was founded the historical documents where were used sugd writings in 1904 in the town Dunkhuan of China where was informed about the occupation of Choch's trade relations.

In the work "The history of Sugd trade" bu French researcher Eten de la Vaser was mentioned about the tradework of Choch with Sugdiy and about leading goods in commerce.

Tashkent oasis' economical increasing on a large scale stimulated the commercial economical and cultural relations. In this period through oasis, the main caravan roads lied through international towns and inner attended roads, mainly were the roads which connected Choch with Sugd regions. Y.F. Buryakov made things clear, comparatively analyzing the handwritings and archeological facts of Choch-Sugd trade roads directions. Mostly, scientist mentioned, that in 1-st middle ages

Choch-sugd roads were only two directions. The 1-st road was near but very heavy way. It brought to Samarkand, Jizakh, Mirzachul through Chirchiq river falling to Sirdarya, which situated below Kata Qiziltepa. From this location the road lead to chirchiq rivers left oasis across Chinochkat, Shuturkat, Old Tashkent and Zayatikent to Binkat. Choch, Iloq oasis were the second further road connected Sugd, but it was safe and busy streets. In written sources it was named "Banokat yuli", this road lead fron Sugd through Ustrukhona to the direction of Jizakh-Zomin-Xovos, turn to Xovos, from north, it lead to upper location falling to Ohangaron river to Sirdarya. From this location through Xavaskat-Xudayikat-Ohangaron to Chirchiq valley, it was connected through old Tashkent ti Chinochkat –Binkat. In Tashkent oasis developed territories of Central Asia had passed the economic cultural and urban processes.

That possession was the cause of resettlement of nomadic tribes on a mass scale from east to west, whose main economy was cattle breeding. In particular, the tribes moved from below Sirdarya territories to above Sirdarya, from that place to western Zarafshan and Kashkadarya oasis. As a result , one of the old great state Kang fell into decay in the III-century of eragot detached into independent propertied from Kang union.

Exactly in this period in the historical map of Sirdarya river organized Choch's property and the capital under this name, the economic, cultural and political process which had happened in this period , played the main role in the development of Choch's property in Central Asia. In particular, the ambition of enlarging the western territories of China's empire had influence on west, especially caused in the development of commercial, economic relations with Central Asia. In 121 years of era, when the tribe of Khun was conquered the empire began to seize the west countries. In order to achieve the intention China's empire send envoy missions to western countries fifth-sixth time in a year, in some years more than ten times larger (consisted more than 100 members) and smaller (around 100 members).

Such envoys took active part in 1-st Middle ages, as it was mentioned in resources, in 437 years China's envoy visited west countries and together with him 16 properties, also Choch's envoys visited China. One of the main task of envoy missions with Choch's oasis was to learn the possibilities of the development of commercial economic and cultural relations with west countries. I.e. oasis' peasant people and properties.

In the development of relations with east countries in the 1-st Middle ages period was very important the process of regions social political life, which happened at the same time with ecological situations.

On the eve of this period in Central Asia had happened the ecological decline (III-IV centuries of era) between Sirdarya's cattle-breeding tribes, the main mediatory were directed to the peasant and cattle-breeding tribes' commercial-economic and cultural relations and in this process Choch's property took up the main value.

Sirdarya's middle flow basin and its right inflow-Chirchiq and Ohangaron oasis's peculiar from three side was rounded by horse-shoe shaped, sky scraper mountains of Tyan-shan's west ranges – Chotqol , qurama, and Qurama ranges which stretched up to Sirdarya with Qoramazor mountains.

Geographically, Fergana and Talas oasis had an opportunity for passing which had passes along Choch's mountains and was convenient for cattle breeding and thorough bred horses. Beginning from III-era, was owned Sirdarya valley's united plain and front mountain territories. That was the cause of changing the cattle breeding population into settled way of life. The increasing of urbanization process in this territory, in its turn brought to appearance town and town type main catlage-craff and commercial centres.In particular, in this period Ohangaron oasis was Choch's economic center, a lot of minerals was dig out from various territories – from Lashkarak mine territories was founded silver, Qizilolma Gold, Kukrel bronze, Shovgaz iron. Besides that raw material was a recycled un center. Next to Turkat, (Iloq), Tukhat(Qulota), today's Angren had developed a big industrial and commercial locations as Nomsiztepa, Qurg`onteppa, Kindiktepa. Also, Feruza stone (in China's source as se-se) was dig out from the mountains which were situated in Choch's oasis. In East countries, this stone was valued as helper of happiness and victory, and as a talisman which saves from overlook, anger of evil spirit, different venomous

insects and snake-scorpions. From the point of scientists , the main mine where feruza stones of high quality was dig out, situated in the south part of Qoramazor mountains, on a right bank of Ungurlisay, besides, in the Iloq territories, some of them in Oqtepa, Gulduran, Feruzakon the mines which was not so big. Feruza stone was the main stoneware of not only in Choch's east countries and in trade relations, but in Sugd town's trade economic relations, too. In particular, during the scientific works in the temple ruins of Erqurgon town (era's III-V centuries) was founded pendent golden jewelry decorated with Feruza stone.

Choch was situated in the convenient geographical region where settled population and nomadic tribes had active relations zone from the old periods for people's of Central Asia had served as a "bridge" for the development trade economic and cultural relations. If we pay attention to the sources of ancient times, exactly, between Sirdarya's middle basin settled population and cattle-breeding nomadic tribes is determined the ground of relationship. In particular, according to Strabbon facts "Yaksart separates Sugd and settled population" another important facts were given by Dioniciy Perigret as: after the Sugdiyana's along Yaksart's flow lived saks where an expert rifleman battled with bow. This fact proves that desert nomadic peasants of oasis' population developed in all spheres and how Choch was very important in development. Besides, you can analyze different sources about nomadic cattle breeding's graveyard strong-hold, either peasant either cattle-breeding tribes which lived in Choch and Fergana inner relations territory in the middle of the 1-st millennium of era proves the development of trades exchange of commodities. In the development of exchange of commodities "Dasht yuli" was very important. From the point of scientists, in this process, nomadic cattle-breeding tribes in exchange for fell, fur, wool and wool industries and also meat, dairy produces from settled population, exchanged military weapons and other industries.

According to the result of archeologists, only the united territories of Tashkent oasis' nomadic tribes (Turkish) the nomadics brought the untreated fell and then it was processed by settled population.

The facts given above shows Iloq's separate status in the development of commercial-economic and cultural relations similar with Choch , in this period.

Iloq was Central Asia's old urbanization place between to rivers and included from upper and middle flow easant oasis of Chirchiq river.

Conclusion

The facts mention that region especially Iloq took active part in china's commercial-economic relations in this period. If we analyze the given facts of this sources, really the development of trade-economic and cuturalrelations between developed west and far East great civilization and its increasing had great impact on Central Asia's population as baxtriys, parfiys, khorezmiys and mostly Choch's and Iloq's population.

The economic relations and Choch's merchants production in the west and east, in its age, traded in different cottage industries, at the same time one of the saleable productions were made by local craftsman. So Iloq people brought to China town their own cultural achievements civilizations, and was a leader in spreading to other territories. In leading trade economic and cultural relations of east countries with nomadic tribes played a great role in it. In this period in one of the old ages were wide spread the trades formed type of exchange of commodities.

In particular, the region's joined territories with borders, the south-east borders, could be seen local nomadic tribes made the bow with the shape of decorations using animal bones or horns by Iloq handicrafts. This proves about leading trades relationship.

As a conclusion it should be mentioned that in the period of 1-st Middle Ages Choch's properties reached high level of development. The capital of the country became the center of great handicrafts and trade.

The location of Choch at the international convoy trades crossing, first of all with east countries' regions gave opportunity to take active part in commercial-economic relations.

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THE CREATION OF THE AMUDARYA FLEET

Abstract: *Researching Aral Sea by Russian Empire, founding Amudarya fleet and it's role in trade relations between Bukhara and Afghanistan in this article.*

Key words: *Russian Empire, Bukhara Emirate, trade relations, trade routes, Aral Sea, ship, boat, Amudarya fleet, waterway, commerce, Termez, Sherabad.*

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Introduction

Boats on the Amudarya River have been used since ancient times and have been used extensively for military and economic purposes. In recent years, the Russian Empire after the conquest of the Bukhara Emirate established the Amu Darya fleet, mainly for military purposes, and organized steamships. Nevertheless, the role of the Amu Darya fleet was important in the trade of the Bukhara Emirate with foreign countries.

Materials and methods

In 1848, the Governor-General of Orenburg V.A. Obruchev said in his report to the Russian emperor that he began to study the Aral Sea. Butovkov was appointed the leader for investigating the Aral Sea and taking pictures of it. Thus, the Russian Empire began to investigate the islands.

Between 1849 and 1850, Butakov created the first comparative map of the Aral Sea. In 1852 it was. With the Butakova's initiative opened the first parachute to the Aral Sea [1, P. 91]. In the spring of 1853 the island fleet was founded. First, the Perovsky and Obruchev steamships were commissioned. In 1853, Butakov, appointed head of the fleet, made his first trip to Syrdarya, to Perovsky [2, P. 13].

As a result of studying the Aral Sea, Butakov also conducted hydrographic reserchs on the Amu Darya River. From August 1, 1873, under the leadership the Chief of Staff Colonel A.V. Kaulbar the lower part of the Amudarya River was investigated.

As a result, in the same year parachute flights were made to the lower part of the Amudarya River. In 1879, a comprehensive expedition was organized to build railways in Central Asia and to build full-fledged steamships in the Amu Darya. The expedition consisted of Count Rostovtsev, engineer Etukov, professor Sarokin, lieutenant colonel Mayev and others. The main objective of this study was to determine in which regions of Central Asia the railways and fleet of the Amu Darya River are built.

The Amu-Darya fleet was founded in 1887, and its original purpose and charter was adopted. The following rights have been defined for the Amudarya fleet.

1. The organization of passenger traffic, as well as public and private freight;
2. Assistance to servicemen in the use of weapons, food and other goods during hostilities;
3. Satisfying Caspian Highway
4. Conducting a hydraulic survey [3].

The use of the water of the Amu Darya was of great importance in ancient times. According to the ancient sources in the ancient period that water was widely used in commercial trade. In particular, Strabon gave important information about the waterways of Central Asia in his famous geography. [4, P. 311]

During the Kushan period, the Amu Darya River was widely used in relationsteamships India and Khorezm. This waterway was transported from Termez to Urgench, Sarykamysh and from the Ozbai River to the Caspian Sea, and then to the Black Sea through the Caucasus [5, P. 236].

Many ancient cities and settlements on the banks of the Amu Darya River were built and developed in connection with waterway or livelihoods. Termez was one of the most important port cities on the Amu Darya River in ancient and medieval times. The Spanish envoy Klavixo also notes that the sailors who have special rights in Termez and its surroundings were created to move the coast to this coast [6].

The famous Arab tourist Ibn Battuta (second half of the 14th century) wrote that through the Amu Darya river transported and sold agricultural products on steamships from Termez to Urgench, delivering these steamships to Urgench in 10 days [5, P. 239].

In the last Middle Ages, the use of the Amu Darya River continued. Especially in the 19th and 20th centuries, the use of the Amu Darya River became more intinsive.

At the beginning of the XIX-XX centuries, the masters were engaged in shipbuilding in the Bukhara Emirate's Karki, Kalif and Sherobod. This is due to the fact that the inhabitants of these settlements have benefited greatly from the Amu Darya waterway in their trade. If you needed to make boats, you could find more than 16 craftsmen who could sail around Kalif. In two months the masters were able to build up to 10 boats up to 600 pud capacity, each of which costed from 300 to 352 rubles [7, P. 24]. There were more than 10 craftsmen in the valley of Sherabad. The boat, which could carry 600 pud of load, was built in 40 days. Each of them was sold from 200 rubles to 235 rubles [8].

Like in other areas after the Russian invasion, Russian military and tourists have been studying and collecting information about the Amudarya river routes. The military intelligence officer A.Bekov, who studied the military potential of the East Bukharan colonies in 1876-1878, told the Russian government that steamships were being built by local residents in Pattakesar (Termez), Shurob, Chokqaguzar, Kalif and Kerki.

In general, in the second half of the 19th century, we see that the Amu Darya operated more than 10 sails between Termez and Chorjoi. These experiences were important for domestic and foreign trade in the local population.

In 1887, the Russian government launched the Amu-Darya fleet. As a result, large steamships and boats were brought and began to travel to the Amudarya River. However, the steamships and boats that were brought were not allowed to enter the Amu Darya River. Therefore, the steamships was difficult to travel. This was done in the first place for military purposes. Secondly, the opening of the Amudarya fleet played an important role in the development of regional convergence. Initially, the flotilla belonged to six steamships , each with a capacity of 25 tons, excluding passengers [9]. The rest of the cargo was transported on 13 brackets of steel barges with a loading capacity from 50 to 100 tons each. In the summer, the steamships range from Chorjoi to Termez for 7 days, and in the winter up to 11 days [10, P. 44].

Routes along the Amu Darya River were characterized by a distinctive feature. Although the steamships are not large, they have a comfortable kitchen. Due to the variability of the river, the abundance of islands, blurred river water and signs, seizures occurred during the day, and at night they stopped.

Typically, the steamships stopped on the slopes, which was almost repeated every day [11, P. 728]. Fuel consumption for a steamships was up to 2700 rubles. Earned income was not more than 2,200 rubles [12, P. 241]. The income payable was less than the cost, but the activity of the flotilla did not cease.

Because the waterway was important for the Russian Empire. The emirate of Bukhara, in particular, has won a lot. The cost of ground transportation was expensive. The cost of water transport was about 3-4 times cheaper, and secondly, the steamships could carry large volumes of cargo.

In addition to the flotilla, Bukhara boats are also involved in the river. They mainly carry passengers and cargo during cruises. Boatmen were given 15 tiyins, sheep and goats for 5 tiyins, horses, camels, cows 15 tiyins for each. Bukhara boats traveled 25-35 km a day.

For example, boats from Termez to Lake Jilley went for 15–20 days, in the summer - 12–20 days, from Jilley or Saray to Termez - for 4–6 days. Thus, despite their slowness and value, water transport was of great importance for the production and import of products in Eastern Bukhara. The steamships did not stop at the Russian invasion. About 600 steamships were transported along the Amu Darya River. Their cargo steamships loaded from 800 pud to 1500 pud [13].

In the period from 1891 to 1892, 11,000 puds of green tea, 4000 puds of Nile dyes (dark blue), 1000 pud "doka" and other products were imported from Sherobod to India via the Chochkaguzar in 1891-1892 [14, P. 16]. 4 types of green tea from India: "Lank" - 44 tillo, 44 lunka nazgur 22 tillo, "patta" 14 tillo, "kepek" 11 tillo, 14 tillo each pud of nile dye [14, P. 17].

The Pattakesar waterfall of the trade relations of the emirate of Bukhara with Afghanistan were also significant. Thanks to this transition, in two years (1891-1892) 715 thousand rubles worth of goods were transported. These products mainly consisted of dried fruits, including 118,000 pita raisins, 27,500 heads of livestock, 41,400 pud of cotton, 12,400 pud of seeds

and 13,000 pudding dyes. At the same time, 11.1 thousand pud of sugar, 0.5 thousand pud of cakes, 2.2 thousand pud of ceramics, 2.6 thousand pud of kerosene, 7.4 thousand pud of metal, 25.7 thousand pud of fabric and 2.2 thousand other various products were exported [14, P.37].

From 1898 to 1976 there were four steamships intended for communication with Afghanistan in Pattakesar, two of which were in Bukhara and two in Afghanistan [15, P. 64]. Their annual income was about 3000 rubles. There are three steamships , which one in Bukhara and two in Afghanistan. Of these, Sherabad's nephew earned about two thousand tanga a year [15, P. 65]. The Emirate of Bukhara had its customs in the Amu Darya transgressions, and the proceeds from these customs were sent to the emirum treasury.

At the start of the Amu-Darya fleet, the Tsar and the Queen worked with two parchment railings [11, P. 570]. The Russian government allocated several steamships to reinforce the Amu Darya fleet, but these steamships and barges were not adapted for sailing in the Amu Darya. According to the information, Amu Darya very quickly changes its course, so the ship and the parachute were difficult to move. You didn't even have pointers pointing to directions. It was difficult to find the water direction of the Amu Darya River, and those who knew this were considered fingerprints. They did not always manage to direct the direction of the water. The river frequently changes its course, and if the water flows from 2 hours, the third time the direction changes its direction and the current is filled with sand. By 1895, the addition of a ship called "Tsesarevich" was launched. After that, many steamships and steel barges were brought. In 1897 "Velikiy knyaz", "Velikaya knyazna Olga", and "Emperor Nicholas II" steamships were brought in in 1901 [11, P. 570].

The cruise of the towing barge took 60 km per day to swin the storm. Sometimes, the steamships were staggering for a few days. From Chorjoi to Termez, the ship was made twice a month. 10000 puds of cargo were transported each time, and 20,000 puds were transported for one month [14, P. 8]. The fleet of the Amu Darya River has not been halted, although there are many difficulties with shipping. The one-year cargo turnover between Termez and Chorjai was 25,000,000 pud [16, P. 25].

In 1908, 21,900 passengers and 765,000 pud were transported between Termez and Chorju. The cost of one year's cargo was 443,000 rubles. In addition to the watercourse, boats built by local people were also involved. They have the capacity to carry 200 puds to 1,000 puds. The cost of shipping on boats is set at a distance. From Urgench to Charju, from 10 to 30 tanga each, and from 5 to 15 tanga at the checkpoint, from Chorjoi to Karki and from Karki to Termez, 20-25 tanga. One-year freight turnover was 250-300 thousand pud [11, P. 572].

By the beginning of 1895 the Bukhara Emirate was deprived of its customs. In 1894, the Russian government started forming a single customs system, taking into account the demands of the political agency in Bukhara and officials in Turkistan. In that year, the Russian-Bukhara customs line was abolished. As a result, the entire customs system of the Emirate was transferred to the Russian customs system. Bukhara's internal markets have been part of Russia's domestic market since then. This is a great blow to the economic life of the Emirate of Bukhara, and has resulted in the loss of the second largest treasury of Bukhara treasury.

At the end of 1894, early 1895 year, new customs offices were established in Kushka, Karki, Kalif, Guzar, Pattakesar, Gissar and Ayvaj [16, P. 195].

Conclusion

The inclusion of the Emirate of Bukhara in the customs system of Russia has created a great deal of difficulties for the local population. Local ships have also been banned unauthorized. In addition to stationary events, other activities have been suspended. The Amu Darya River had more military uses than the waterway.

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QR – Issue QR – Article

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THE FUND OF NATIONAL ARCHIVE OF UZBEKISTAN ABOUT THE SCIENTIFIC INSTITUTIONS IN TURKESTAN

Abstract: *This article is devoted to the study of archival documents, scientific societies and institutions of Turkestan, carried out its activity in the second half of XIX – early XX centuries, which are stored in the National Archive of Uzbekistan. The article provides information about their occurrence and activities. As well as a description of the archival holdings of these scientific societies and institutions.*

Key words: *The Turkestan General-governorate, the Russian Empire, scientific society, National Archive of Uzbekistan, fund, inventory, business, Tashkent, K.P. von Kaufman, the Governor-General, science.*

Language: *English*

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Introduction

During the reign of the Russian Empire (1867-1917), radical changes occurred in the social, political and economic life of Turkestan. These events particularly affected science and education, and the colonial government ensured the development of science and education and supported their goals. The tsarist government of the Russian Empire seeks to systematically examine the land and the local population in order to get more economic benefits from the newly occupied territory and ensure the dependence of the local population. In the end, researcher Z.A. Saidbabaev wrote: "Russian government officials are interested in receiving scientific information about Central Asia as soon as possible. The main goal is to learn more about underground and underground resources and start hostilities"[1].

To this end, central and local officials of the Russian Empire created many scientific associations and institutions immediately after the creation of the governor of Turkmenistan. These scientific societies formed the basis for the development of national scientific and academic education. This scientific society was founded in the state during the reign of the Russian Empire, many of which did not exist in 1917-1918.

Materials and methods.

A study of their activities currently provides important information about the history of the development of science in our country. To date, these companies have been the subject of several studies. Currently, the National Archive of Uzbekistan (NAUz) stores a lot of documents on the activities of this scientific community[2]. At present, the Academy of Sciences of Uzbekistan has 11 scientific institutions and organizations, and the documents of each scientific community are stored separately. In particular, the following:

1. Turkestan branch of the I-69 Foundation - Russian Imperial Geographical Society;
2. Tashkent Astronomical and Physical Observatory in the military land unit of the Fund I-70-Military District of Turkestan;
3. Fund I-71-Turkestan Archaeological Club;
4. Fund I-72-Turkestan National Museum.
5. Fund I-73-Tashkent Chemical Laboratory;
6. Fund I-103-Turkestan Agricultural Association;
7. Fund I-267-Turkestan Public Library;

8. Fund I-361-Tashkent branch of the Imperial Oriental Society;

9. Fund I-591 - Central Asian Scientific Society.

The fund consists of 1185 different types of storage. They provide basic information on the activities of the above organizations and are an important source for the development of science and history in modern research in Turkestan. In addition, this fund is an important source of history for the history of the country.

For this fund, the I-69 Fund is a branch of the Russian Imperial Geographic Institute, the Turkestan branch. On May 20, 1896, the Russian Turkestan Geographical Journal was opened by the Russian Empire. The company began operations on November 28, 1897. This fund includes documents on the activities of the association from 1896 to 1927. There were 84 storage devices in total. Includes protocols, annual reports, documents, expeditions, various surveys and maps[3].

Tashkent Astronomical Fund and the Physical Observatory, Fund of the I-70-Military Topographic Detachment of the Turkestan Military District. The observatory was built in 1873 and is located under the military territory of the military district of Turkestan. This is a boss load. On November 19, 1878, the state and interim charter of the Center was approved. The main task of the observatory is to determine the geographical position of the country, study the local climate and disseminate astronomical knowledge. Based on this viewing platform, the Institute of Astronomy of the Soviet Union was founded (1966). The Academy of Sciences of Uzbekistan is the Institute of Astronomy named after Ulugbek. The fund includes documents on the history of the country's astronomy, years of metrological observations, observations of comets in the galley and streams. In total, the fund has 148 drives[4].

Fund I-71 - Turkestan Amateur Archaeological Fund. The fund was created by law on October 19, 1895, and on October 31, 1985, the main documents on the Minister of Education and Activities were approved. Contains: 1877-1921. In the meantime, documents have been received. The fund includes reports on club meetings, national archaeological research, reports on club activities, various correspondence and various historical studies. In total, the fund has 84 storage devices[5].

Fund I-72 - Turkestan Museum Public Fund. In 1871, a small museum was created in the Tashkent Chemical Laboratory. Such museums are made of silk in schools. In 1876, the first governor of Turkestan, K.P. With the permission of Kaufman, the museum will open its doors to the statistics committee. The small museum mentioned above is also part of this museum. In 1877, the museum was transferred to the Turkestan branch of the Union of Naturalists on February 12, 1880, the charter of the museum was approved. After the Tashkent public library, closed by Chernyaevsky decree in 1883, the library was added to the museum. On August 2, 1884, the museum began collaborating with the reorganized library on behalf of Governor Rosenbach. In 1918, the museum was transferred to the National Turkestan University and named the Turkmen National Museum. Currently, the museum operates under the name of the State Historical Museum of Uzbekistan. The fund includes museum board meetings, museum history, museum exhibit lists, and museum research information. The fund includes 26 conservation units and presents the history of the museum from 1887 to 1921[6].

Fund I-73 - Tashkent Chemical Laboratory. The construction of the laboratory was approved at the end of 1869, but practical efforts began in May 1870. Initially, the laboratory was under the supervision of the governor of the Turkestan mining department and was engaged in the analysis of ores and alloys. Later, the scope of the laboratory will expand. The institute was closed on January 1, 1883 under the command of Governor Chernyaev. Tools include programmatic and normative analysis, laboratory management, source analysis, and judicial correspondence. Along with the main surveys, there are also tables for observing the weather and summer. The laboratory cell library has a total of 307 storage devices.

I-103–Turkestan Agricultural Fund. January 16, 1885 by order of the Turkestan branch of the Russian Horticultural Society, the Secretary of State was approved. In 1895, the department was transformed into the Turkmen Agricultural Association, and on July 4, 1895, this charter was approved by the Minister of Agriculture and Property. The company continued until the coup from 1917 to 1921.The fund stores the company's charter, letters of ownership of agriculture, minutes of meetings of the board of directors and members of the board of directors, as well as statements and reports on the activities of the company. The foundation includes many community letters, a list of community members, ratings and other documents. In total, 317 storage devices are available[7].

I-231 Fund Entomology Foundation of Turkmenistan. On January 21, 1910, the composition and life of pests determined by the governor of Turkestan on January 21, 1911, was carried out in Turkmenistan. It was necessary to study pests, fungal diseases and plant bacteria, as well as to develop stages of ultrasonic testing. The fund operated until 1917. The fund had 55 storage units. It provides information on station activities, pest control information for your country, work schedules and reports, as well as various types of communications[9].

I-267 Fund - The Public Library of Turkestan. Tashkent Public Library In May 1870, the Turkmen branch was opened by Kaufman. It was closed in 1883 by order of Governor Chernyaev. It was opened together with the museum in Tashkent on August 2,

1884. In 1887, it was called the Turkestan Public Library and was under the control of the Governor of Turkestan. America's first cultural and scientific institution.The fund, currently functioning as the Uzbek National Library named after Alisher Navoiy, consists of 136 memoirs covering the history of the organization from 1884 to 1922. The IMF provides information on the creation, operation, closure and updating, revision and other scientific objects of libraries. Cultural events. Given that the organization is still operating and undergoing various scientific and cultural processes, it should be noted that the IMF is an important source of scientific, cultural and historical reading in the country [10].

Fund I-361–Branch of the Tashkent Imperial Oriental Society. The fund included documentation on the activities of the department, established March 14, 1901, and included information on the termination of the department by 1917. The main activity of the department was the organization and conduct of various lectures at membership meetings. There are 13 storage devices in total. The fund includes the constituent documents of the company, departmental institutions, departments of departments, annual reports and liaison with the Association for Oriental Studies and regional administrations on the study of the oriental language[11].

I-591 Fund of the Central Asian Scientific Association. The company was founded in 1869 by Turkestan K.P. It was created by the governor. With the approval of Kaufman A.P., founded by a group of scientists led by Fedchenko, the mission of the church is to conduct a comprehensive study of the country. The fund includes company membership protocols, information about them and scientific reports. There was also a letter about the design of the program and the community reading program. A total of 6 storage devices are available[12].

Conclusion.

Based on the above data, it should be noted that the scientific community and organizations operating in Turkistan are diverse and diverse. Archives reflecting the activities contain important information about the history of the country, its scientific and cultural development. Therefore, it is necessary to systematically and critically question these sources. The inclusion of such sources covers this topic in its entirety.

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PATRIOTIC EDUCATION OF THE YOUNG GENERATION

Abstract: *In this article, the author argues that patriotic upbringing and social-moral education are forms and methods that have the greatest influence on pedagogy. The formation of these qualities has political, social and environmental, legal and pedagogical factors. The forms and methods of patriotic education, its mechanisms, incentivers and opportunities are always unique and are truly reflected in the educational process. Patriotic consciousness in a subjective phenomenon that does not always manifest itself and can sometimes lead to false beliefs and patriotism.*

Key words: *Patriotition, patriotic upbringing, national idea, spiritual values, noble tradition, civil society, government rights, foster pride, patriotic conscionsness, ideological conviction.*

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ПАТРИОТИЧЕСКОЕ ВОСПИТАНИЕ МОЛОДЕЖИ МОЛОДОГО ПОКОЛЕНИЯ

Аннотация: *В данной статье автор отмечает, что -патриотическое воспитание -это формы и методы педагогического воздействия, направленные на объект воспитания, на формирование у него определенных социально–нравственных качеств. Формирование этих качеств зависит от многих факторов: политических, социальных, экологических, юридических и педагогических. Формы и методы патриотического воспитания, его механизмы, стимулы и возможности всегда конкретны, реально проявляются в процессе воспитательного воздействия. Патриотическое сознание- это субъективное явление, оно не всегда конкретно проявляется, иногда оно может привести к ложному убеждению и патриотизму.*

Ключевые слова: *Патриотизм, патриотического воспитания, национальной идеи, духовные ценности, благородные традиции, гражданского общества, правового государства, воспитывать гордость, патриотического сознания, идейная убежденность.*

Введение

Обеспечение надёжной защиты Родины-священная конституцционная обязанность гражданина Узбекистана. Президент Ш.М.Мирзиёев неоднократно в своих выступлениях подчеркивал- важность формирования у молодого поколения твердой жизненной позиции, чувств ответственности за судьбу, повышения эффективности работ по военно-патриотическому воспитанию и обучению молодёжи. [1]

Национальная идеология является выражением целей и устремлений, интересов и потребностей общества, она придает смысл жизни личности, обогащает содержание бытия человека, мобилизует его физические и духовные силы на достижение высоких целей. «Не всякое мнение, понятие или точка зрения могут стать национальной идеей. Личное мнение – это своеобразный взгляд конкретного человека на те или иные явления, а общественная мысль, выражает синтезированное отношение к истории и действительности. Наконец, через идеи, данное

отношение превращается в факт практического действия и даже в этап истории». [2]

Различают идеи созидательные и разрушительные. «Созидательные, благородные идеи возвышают человека, окрыляют его дух. Именно такими идеями руководствовался великий Амир Темур в своей деятельности по созданию централизованного могущественного государства, по благоустройству отчего дома». [3]

Патриотизм Сохибкирана Амира Темура может служить идеалом самоотверженного служения отчизне, образцом патриотического воспитания молодежи. Особенно сейчас, когда идет интенсивная созидательная деятельность по укреплению независимости Республики Узбекистан и построению демократического общества. Необходимостью формирования национальной идеи в сознании и образе жизни людей требует с целенаправленная работа по патриотическому воспитанию молодежи. В этих условиях особенно необходимо умение своевременно решать возникающие проблемы в сфере воспитания молодежи, работать творчески, демократично и целеустремленно и вести за собой молодежь. Успех здесь неразрывно связан с упрочнением политического сознания молодежи, с активным вовлечением ее в общественную и государственную жизнь, воспитанием у нее непримиримости к проявлениям несправедливости, стяжательства, коррупции и всему тому, что мешает демократическим преобразованием и социально–экономическому развитию в стране. Глубокая идейная убежденность, высочайшая гражданская ответственность за судьбу и будущее страны, моральная чистота, – эти требования сегодня с особой остротой предъявляются к каждому человеку, особенно к молодежи. Формирование патриотизма и гражданской культуры есть залог построения гражданского общества и правового государства в Узбекистане.

Отмечая общенациональный характер национальной идеи, И.А. Каримов подчеркивает,- что «главная цель идеологии национальной независимости – объединять народ во имя великого будущего, побуждать каждого гражданина страны, независимо от его национальности, языковой и религиозной принадлежности, к жизни с чувством постоянной ответственности за судьбу своей Родины; воспитывать гордость за богатейшее наследие предков, накопленные духовные ценности и благородные традиции; формировать высоконравственных и гармонично развитых людей; превращать в смысл жизни самоотверженность ради нашей священной земли» [4].

В этой мысли сформированы цели и задачи патриотического воспитания молодежи и она для нас имеет фундаментальное значение.

Несмотря на актуальность проблемы патриотического воспитания молодежи, к сожалению, в отечественной науке, особенно в сфере социальной философии, этики, мало специальных исследований по нашей теме. Некоторые диссертационные исследования и книги посвящены социально–философскому и социологическому анализу подготовки военных кадров, изучению девинантного поведения военнослужащих, национального и общечеловеческого в патриотическом воспитании. [5]

На сегодняшний день в них исследуются военно–патриотическое воспитание, а также обобщен передовой опыт работы по развитию социальной и политической активности молодежи.

Недостаточно разработаны общефилософские вопросы патриотического воспитания. Часто патриотическое воспитание трактуется как элемент социально–политического процесса, как реализация социальных и нравственных ценностей и организация свободного времени молодежи. Кроме того, патриотическое воспитание исследуется как проявление и содержание патриотического сознания, что и приводит к отождествлению патриотического воспитания и патриотического сознания.

Патриотическое воспитание это формы и методы педагогического воздействия, направленные на объект воспитания, на формирование у него определенных социально–нравственных качеств. Формирование этих качеств зависит от многих факторов: политических, социальных, экологических, юридических и педагогических. С помощью методов педагогического воздействия, опираясь на эти факторы, изучают состояние объекта и определяют механизмы, стимулы, возможности нравственного совершенствования. Поэтому формы и методы патриотического воспитания, его механизмы, стимулы и возможности всегда конкретны, реально проявляются в процессе воспитательного воздействия. Патриотическое сознание это субъективное явление, оно не всегда конкретно проявляется, иногда оно может привести к ложному убеждению и патриотизму.

Национальная идея тоже субъективное явление, но она может стать реальным инструментом социально–педагогического воздействия благодаря формам и методам воспитания, пропаганды и просветительских мероприятий. Формы и методы педагогического воздействия, воспитания, пропаганды, обеспечивают единство субъективного и

объективного, цели и процесса воспитания. Взаимосвязь национальной идеи и патриотического воспитания осуществляется также через различные формы и методы педагогического воздействия.

Патриотическое воспитание человека осуществляется в процессе собственной деятельности, характеризующейся определенной направленностью, формами и методами реализации. Для реализации своих патриотических чувств важны не только собственные желания, стремления, но и практика освоения социальной действительности. Содержательная и процессуальная сторона патриотизма и героизма детерминирована общественной потребностью, интересами и развитием социума, задачами укрепления независимости и обеспечения благосостояния общества. Но нельзя игнорировать то, что патриотизм и героизм есть проявление индивидуальной самоотверженности, индивидуального подвига, то есть активного включения индивида в решениие сверхзадач.

Вместе с тем, в ходе исследования обнаружилось, что некоторая часть молодёжи склонна к эгоизму, эпикуреизму, намерена жить для себя и для своего удовольствия. Это не может не тревожить учёных, педагогов и общественность. Поэтому патриотическое воспитание молодёжи остаётся одной из важнейших задач формирования всесторонне развитой личности.

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