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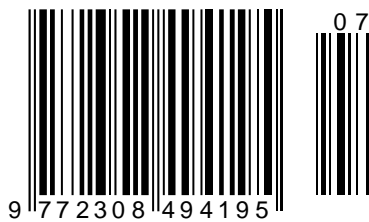
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COGNITIVE MODEL OF THE STRUCTURE OF THE MUNICIPAL BODY ON MONITORING THE MORAL ENVIRONMENT FOR SUBSIDES OF HUMAN RESOURCES

Abstract: The article presents mathematical and cognitive rationales for the establishment of 4 new Departments for monitoring the moral environment of human resources, in which it is advisable to include 12 specialists grouped by profiles from 2, 5, 1, 4 titles. The weights of the Departments are ordered in order of their priority: No. 1 (2 different profiles, 37.96%), No. 2 (5 different profiles, 34.59%), No. 3 (one profile, 34.157%), No. 4 (4 different profiles, 25 %). Specialists of different profiles should be combined into 5 subdivision, according to the number of expert values of the regression coefficients. Confirmatory calculations were carried out using simulation algorithms for the multidimensional (β, C^{+11}) sample of z -variables (with $n=6$). Descriptions of the coincidence of matrix equalities are given for the direct [1] process of mathematical introduction and for the reverse process of cognitive knowledge extraction.

Key words: new moral characteristics of the individual, mathematically introduced and cognitively extracted knowledge.

Language: Russian

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КОГНИТИВНАЯ МОДЕЛЬ СТРУКТУРЫ МУНИЦИПАЛЬНОГО ОРГАНА ПО МОНИТОРИНГУ МОРАЛЬНОЙ СРЕДЫ ДЛЯ ПОДВИДОВ ЧЕЛОВЕЧЕСКИХ РЕСУРСОВ

Аннотация: В статье приведены математические и когнитивные обоснования для учреждения 4-х новых Департаментов по мониторингу моральной среды человеческих ресурсов, в состав которых целесообразно включить 12 «узких» специалистов, сгруппированных по профилям из 2-х, 5-ти, 1-го, 4-х наименований. Веса Департаментов упорядочены в порядке их приоритетности: №1 (2 разных профиля, 37,96%), №2 (5 разных профилей, 34,59%), №3 (один профиль, 34,157%), №4 (4 разных профилей, 25%). Специалисты разных профилей должны быть объединены в 5 отделов-по числу экспертных значений коэффициентов регрессии. Подтверждающие расчеты проведены с применением алгоритмов моделирования многомерной (β, C^{+11}) -выборки z -переменных (при $n=6$). Использован назначенный экспертом вектор $\beta = (\beta_1, \dots, \beta_6)^T$ регрессионных коэффициентов. Даны описания совпадения матричных равенств при прямом [1] процессе математического введения и при обратном процессе когнитивного извлечения знаний.

Ключевые слова: новые моральные характеристики индивида, математически введенные и когнитивно извлекаемые знания.

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Введение

Необходимо «переформатирования» существующих измерителей «социального благополучия», особенно тех, которые интегрированы в «международные витрины ресурсов и к таким подвидам, пользующиеся такими «средствами» как: связи, знакомства, рекомендации, знания, умения, навыки, репутация, присущи измеряемые моральные качества (показатели). Известно, что вышеназванные подвиды конвертируются друг в друга. «Например, мы с удовольствием инвестируем свое время для обретения новых связей и получения нового дохода. Когда мы нанимаем работников, мы покупаем за свои». Для достижения целей госуправления нужны ресурсы. Одними из их источников являются возможности граждан. Все ресурсы можно классифицировать по-разному. Мы рассматриваем некоторые из них, присущие трудовым ресурсам.

Индивидам, принадлежащим к группе человеческих ресурсов и к таким подвидам, пользующиеся такими «средствами» как: связи, знакомства, рекомендации, знания, умения, навыки, репутация, присущи измеряемые моральные качества (показатели). Известно, что вышеназванные подвиды конвертируются друг в друга. «Например, мы с удовольствием инвестируем свое время для обретения новых связей и получения нового дохода. Когда мы нанимаем работников, мы покупаем за свои деньги время других людей. Мы вкладываем деньги в обретение новых знаний, а знания конвертируем в навыки путем тренировок и применения на практике. А навыки, умело примененные приносят позитивную репутацию»¹.

Приведенные ниже моральные показатели индивидов относятся к понятию "человеческие ресурсы", которое «более емкое, чем понятия "трудовые ресурсы" и "персонал", так как содержит в себе совокупность социокультурных характеристик и личностно-психологических свойств людей. «Специфика человеческих ресурсов в отличие от всех других видов ресурсов (материальных, финансовых, информационных и др.) состоит в следующем: а) люди наделены интеллектом, следовательно, их реакция на внешнее воздействие (управление) эмоционально-осмысленная, а не механическая; процесс взаимодействия между субъектом управления и людьми является двусторонним; б) вследствие обладания интеллектом люди способны к постоянному совершенствованию и развитию, что является наиболее важным и долговременным источником повышения эффективности любого

общества или отдельной организации; в) люди выбирают определенный вид деятельности (производственный или непроизводственный, умственный или физический), осознанно ставя перед собой определенные цели. Поэтому субъект управления должен предоставлять все возможности для реализации этих целей, создавать условия для воплощения мотивационных установок к труду. Человеческие ресурсы являются конкурентным богатством любой организации. В 70-х гг. отделы кадров, отделы управления персоналом многих американских фирм и компаний переименованы в отделы. Человеческие ресурсы, где наряду с традиционными функциями (найм и отбор персонала, обучение, деловая оценка и др.) стали выполняться функции по стратегическому управлению человеческими ресурсами, формированию кадровой политики, разработке программ развития персонала, планированию потребности в человеческих ресурсах и т.п.»²

Премьер-министр Великобритании Тереза Мэй назначила министра по предотвращению самоубийств. Она считает, что это должно поспособствовать уменьшению количества суицидов в стране. «10 октября в честь Всемирного дня психического здоровья в Лондоне прошел первый в мире саммит по вопросам психического здоровья, на котором были представители 50-ти стран. Именно на саммите Тереза Мэй назначила бывшего министра здравоохранения Джеки Дойла-Прайса на новую должность -министра по предотвращению самоубийств»³.

Также «премьер-министр Тереза Мэй объявила о назначении министра по вопросам одиночества. Согласно статистике, 4,5 тысячи человек в Великобритании каждый год лишают себя жизни. Хотя все же уровень самоубийств с каждым годом снижается»⁴.

Актуально иметь органы по мониторингу морально-психологической среды населения. Ниже излагается один из подходов формирования структуры муниципального органа по мониторингу моральной среды. Когнитивная модель структуры муниципальных органов по мониторингу моральной среды для видов человеческих ресурсов состоит из 4-х валидных моральных показателей, из 12 показателей, соответствующих своему валидному (и моральному) показателю. Среди 12 показателей имеются такие, которые имеют смысл одной z-переменной, входящей в несколько валидных u-переменных u_1, u_2, u_3, u_4 . Они могут иметь другой когнитивный смысл, например, z^+ -переменная №1

¹ www.b17.ru/blog/78191

² <https://hr-portal.ru/varticle/chelovecheskie-resursy>

³ www.kp.ua

⁴ www.tass.ru/obschestvo/4881148

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(z^+) входит в 2 валидные переменные y^+_2, y^+_3 . Мы придали ей один смысл, подчиняясь математическому факту - z^+ -переменная z^+_1 входит как слагаемое один раз в формулах $y^+_{ij} = z^+_{i1}c^+_{1j} + \dots + z^+_{i5}c^+_{5j}$, $j=1, \dots, 5$, $i=1, \dots, 20$. Но зависит от 2-х валидных переменных y^+_2, y^+_3 . Их смыслом: $\text{смысл}(y_3, z_1)$ и $\text{смысл}(y_2, z_1)$, можно придать разные подсмыслы (Таблица, столбец 5, строки 2 и 3). С учетом смыслов таких z^+ -переменных количество моральных показателей увеличится до 20. Для 12 или 20 показателей существует 6 показателей, обладающих суммарным смыслом той или иной части смысла вышеназванных 12 показателей. Они имеют 6 суммарных смыслов, каждый смысл порождает свое название отделу, с соответствующими функциональными обязанностями.

Ниже показаны обоснования для функционирования 4-х Департаментов мониторинга моральной среды у человеческих ресурсов, в состав которых целесообразно включить 12 узких специалистов, объединенных в 6 отделов. Число специалистов одного профиля (из 12) должно бытькратно фактической нагрузке по профилю. Вопросы нормирования труда каждого специалиста и вопросы оплаты их работы мы не рассматриваем.

Предлагаемая ниже переоценка показателей похожа на прогнозирование будущего (именно для этого чаще всего служит моделирование). Наше прогнозирование не есть восстановление прошлого, а является оцифровкой того, что есть в действительности, а не использование традиционных, не оправдывающих изменившиеся психологические, поведенческие доминанты.

Воспользуемся применениями валидных показателей, измеряющих то, что есть и трудно измеряемо, а не то, что удобно и легко измеряется.

Мы не рассматриваем такие моральные нормы, одобряемые и поощряемые обществом, даже находят своё отражение во многих законах различных государств. К типу таких моральных качеств относятся: совесть, достоинство, честь, справедливость. Мы рассматриваем другие моральные свойства: «по правде (правильно) поступать», «принудить к...», «обмануть, чтобы...», «страху нагнать». Они озвучиваются в обычной жизни простыми тружениками «на кухне» для сравнения индивидов по качествам. Они являются валидными показателями. Слово «валидные» имеет смысл «отражать действительность» (reflect, represent, validity, reality, permissibility, valid, effectiveness).

Рассматриваемые нами качества часто фигурируют у индивидов-экспертов в их умозаключениях. Мы называем их «моральные свойства», объявляем их валидными переменными, зависящими от других моделируемых z -переменных «» В первую

очередь мы рассматривали не «моральные качества» (они измерялись в шкале отношений), а рассматривали измеряемые в шкале отношений «моральные свойства». Числовые значения некоторых из моральных показателей приведены в статье [1].

Цель исследования: выявление валидных и измеряемых показателей моральных качеств (из категории оппортунизма) через призму структуры муниципальных органов мониторинга человеческих ресурсов. Приоритетом при проектировании будущей структуры муниципальных органов мониторинга человеческих ресурсов по нашему мнению является моральная составляющая у их объектов мониторинга. Это придаст новый импульс работе социально ориентированных муниципальных органов, внедрит в жизнь достижения поведенческой экономики.

Математические модели, когнитивные смыслы и смысловые задачи

Мы используем модель цифровизации значений показателей индивидуального сознания, где решается Смысловая Обратная Задача (СОЗ) [2]. СОЗ и задачи математического внесения индикаторов наличия знаний решались и их применения приведены в работах [3-6]. Смысловые обратные задачи [2] решаются при наличии математической модели и решаемых в ее рамках разных спектральных и оптимизационных задач [5-11]. Субъективно и когнитивно определяются когнитивные смыслы параметров и переменных математической модели, решаются смысловые прямые (СПЗ) и смысловые обратные задачи (СОЗ) [2,12-14]. Решениям Смысловых Задач предшествуют решения следующих математических задач из двух моделей. ОМ МЛРА [1,3-5] и ОМ ГК [12-14], Обратная Обобщенная Модель Множественной Линейной Регрессии (ОМ МЛРА) [1]. В ОМ МЛРА [1] решаются математические задачи ОСЗ1 [11], ОСЗ2 [9], Обратная Спектральная Задача для ОМ МЛРА [1, стр.616-620], Оптимизационная Задача [1, стр.616].

Суть нашего подхода может быть сведена не к анализу выборочных коэффициентов корреляции и коэффициентов регрессии. А может и должна содержать другие извлекаемые знания, кроме знаний, интерпретируемых из равенства $Z_2 = Z_1 \beta$. Здесь [1] впервые рассматриваются элементы матрицы собственных векторов для моделирования влияющих на вектор $\beta = R^{-1} R_{12}$ подматриц. Решаются 3 ОСЗ: ОСЗ1 [11], ОСЗ2 [9] ОСЗ для ОМ МЛРА [1]. Эти 3 задачи решаются, если в матрицу C^+_{11} собственных векторов математически введены - через индикаторы наличия знаний, значения весомых «весов».

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Полученные модельные матрицы данных $Z_{mn}=[Z_1|Z_2]$, будут иметь заданные целевые значения коэффициентов регрессии $\beta_1, \dots, \beta_{n-1}$, таких что $Z_2=Z_1\beta$. Такое проектирование рядов векторов значений коэффициентов регрессии $\beta=(\beta_1, \dots, \beta_{n-1})^T$ и соответствующих им рядов матриц $\{Z_{mn}=[Z_1|Z_2]\}$ с заданными алгебраическими и когнитивными свойствами позволяет через решение СПЗ и СОЗ, аналогичных приведенным в [2,12-14] разработать Когнитивную Модель Структуры Муниципального Органа по Мониторингу Моральной Среды для подвидов Человеческих Ресурсов.

Извлечение введенных знаний (в ООМ МЛРА) проведем с применением соответствующей когнитивной модели, использующей математическую модель главных компонент [12-15]. Возможности соответствующих разным предметным областям когнитивных моделей показаны в публикациях [14-15].

Программа –таблица моделирования матрицы $C^{(+)}_{11}$ и матрицы Λ^{+}_{11}

Кратко перечислим шаги вычислений нашей программы и приведем числовые значения элементов моделируемых и вычисляемых матриц (Таблица 1, Таблица 2, Таблица 3, Таблица 4, Таблица 5, Таблица 6). Они демонстрируют совпадение матриц, вычисленных в процессе моделирования, матрицам, вычисленным в процессе контроля правильности вычислений $Z^{+}_{20,6}=[Z^{+}_{1}|Z_2]=>(\beta, \Lambda^{+}_{11}, C^{+}_{55}, \beta^{+}_{1}, \beta^{+}_{2}, \beta^{+}_{3}, \beta^{+}_{4}, \beta^{+}_{5})$, где у модельной (β, C^{+}_{55}) -выборки $Z_2 = Z^{+}_{1}\beta$ или $Z^{+}_{2}=Z^{+}_{1}\beta^{+}$. Заданные значения $\beta_1=4, \beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3$ в точности равны вычисленным (предсказанным по процедура *Регрессия* из надстройки Анализ данных ЭТ Excel) значениям (Таблица 3) нестандартизованной z-переменной $z_6=\beta_1z^{+}_{1}+\beta_2z^{+}_{2}+\dots+\beta_5z^{+}_{5}$, при вновь вычисленных значениях $\beta_1=4, \beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3$ (Таблица 8).

При $\varphi=0.6$ мы смоделировали при решении Оптимизационной Задачи (Таблица 1, Рисунок 1, Рисунок 2) один спектр из бесконечного множества спектров. Один из этих спектров: $\Lambda^{+}_{11}=\text{diag}(1,897809,1,127819,0,7923195,0,6451315,0,5369217)$ мы вычислили (Таблица 1), применяя процедуру Solver (Надстройка «Поиск решения» в ЭТ Excel). Работа с процедурой Solver состоит из следующих шагов [1].

Введем в ячейки ЭТ Excel известные начальные значения элементов матриц C_{11} и Λ_{11} [1]. Проверяем в программе-таблице (Таблица 2) выполнение и точность равенств $C^{T}_{11}C_{11}=C_{11}C^{T}_{11}=I_{(n-1)(n-1)}$, $n=6$, $R_{11}C_{11}=C_{11}\Lambda_{11}$. Эти значения являются начальными для реализации

метода GRD2 в процедуре Solver. Далее реализуем ниже приведенные Шаги 1-7.

Шаг 1. Выделяем индексы (k, j) и значения элементов c^{+}_{kj} из матрицы C^{+}_{11} с выделенными индексами. Так как $n-1=5$, то введем пары ячеек ЭТ Excel назначенные значения элементов из каждого столбца матрицы C^{+}_{55} . Эти элементы не изменяют своих значений при нажатии кнопки «Выполнить» (Рисунок 1).

Шаг 2. Ввод в ячейки ЭТ Excel скалярных равенств, взятых из матричных равенств $C^{+}_{55}C^{+}_{55}=C^{+}_{55}C^{+}_{55}=I_{55}$, $R^{+}_{55}=C^{+}_{55}\Lambda^{+}_{55}C^{+T}_{55}$. Для элементов моделируемого нового спектра $66\Lambda^{+}_{55}=\text{diag}(\lambda^{+}_{1}, \dots, \lambda^{+}_{5})$ введем ограничения $\lambda^{+}_{1}+\dots+\lambda^{+}_{5}=5$, $\lambda^{+}_{1}>\dots>\lambda^{+}_{5}>0$, $\lambda^{+}_{1}=\lambda_1$, где λ_1 – известный всегда наибольший элемент известного спектра $\Lambda_{55}=\text{diag}(\lambda_1, \dots, \lambda_5)$.

Шаг 3. Назначить ячейку с формулой $\lambda^{+}_{1}+\dots+\lambda^{+}_{5}$ целевой функцией процедуры Solver.

Шаг 4. Назначить в качестве изменяемых ячеек (неизвестных переменных задачи) ячейки матрицы C_{55} и ячейки элементов столбцов №1, ..., №5 матрицы C^{+}_{55} .

Этим действием достигается неизменяемость компонентов собственных векторов №1, ..., №5.

Шаг 5. Назначить в качестве изменяемых еще 5 ячеек с значениями $\lambda^{+}_{1}, \dots, \lambda^{+}_{5}$.

Шаг 6. Ввод в строке окна Solver ограничений для ячеек с их значениями вида $\lambda^{+}_{1}, \dots, \lambda^{+}_{5} > 0$, $\lambda^{+}_{1}=\lambda_1$. Ввод пороговых значений 1.05373033, 0.08373033, 0.70337303, 0.001 для значений $\lambda^{+}_{1}, \dots, \lambda^{+}_{5}$, применявшихся для достижения строгих неравенств $\lambda^{+}_{1}>\dots>\lambda^{+}_{5}>0.001$.

Шаг 7. Нажать кнопку «Выполнить».

Мы будем использовать решение ОСЗ 2, где найденная матрица не равна матрице $I_{55}:\Lambda^{+}_{55} \neq I_{55}$. При этом выполняется соотношение $\Lambda^{+}_{55}=C^{+T}_{55}R^{+}_{55}C^{+}_{55}$, C^{+}_{55} , при $\Lambda^{+}_{55} \neq I_{55}$, $R^{+}_{55} \neq I_{55}$. Пара матриц $(\Lambda^{+}_{55}=C^{+T}_{55}R^{+}_{55}C^{+}_{55}, C^{+}_{55})$ важна при когнитивном извлечении знаний и заменяет собой одну матрицу R^{+}_{55} , при ненулевых значениях ее коэффициентов корреляций $r^{+}_{ji}=r^{+}_{ij} \neq 0, i \neq j=1, \dots, n-1, i=1, \dots, n-1. c_i^{+}\Lambda^{+}_{11}c_j^{+T}=r^{+}_{ij}, r^{+}_{ji}=r^{+}_{ij}, j=1, \dots, n-1$.

Здесь при переходе от матрицы R^{+}_{55} к паре матриц $(\Lambda^{+}_{55}, C^{+}_{55})$ можно применить термин «сверление» (dryll down). В информационных технологиях SAS Institute имеются системы с встроенными методами Drill down ("сверление"), "сенсоры" и "цветовая раскраска", помогающие пользователям ориентироваться в сложных данных, отслеживать тренды и зависимости и определять ключевые параметры.

Мы не используем свойство коэффициента r^{+}_{ji} как коэффициента линейной пропорциональности [16] между изменчивостью z_{ki} i-ой z-переменной и изменчивостью z_{kj} j-ой z-переменной: $z_{ki}=r^{+}_{ij}z_{kj}$, $k=1, \dots, m$. Мы используем другой коэффициент комбинационной связи [16] -

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коэффициент (y,z) -корреляций $\text{corr}(y_i, z_j) = c_{ij}$. Эти равенства применимы для ненулевых значений $r_{ij}^+ \neq 0$.

Моделируем нужную нам пару матриц $(C_{11}^+, \Lambda_{11}^+)$, вместо схемы $(n, \varphi_{11}) \Rightarrow (R_{11})$ в ПМ МЛРА мы реализовали [19] схему $(n, \varphi_{11}) \Rightarrow (C_{11}^+, \Lambda_{11}^+)$. В матрицу C_{11}^+ мы вводим знания. Вложение знаний в матрицу R_{12}^+ происходит через знания из известного вектора коэффициентов регрессии β и знания из модельной матрицы $R_{11}^+ = C_{11}^+ \Lambda_{11}^+ C_{11}^{+T}$: $R_{12}^{(+)} = R_{11}^{(+)} \beta$.

Этот новый вектор $\beta^+ = R_{11}^{-1} R_{12}^+ = C_{11}^+ \Lambda_{11}^{+T} \Lambda_{11}^+ C_{11}^{+T} R_{12}^+$ отличается от старого вектора $\beta = R_{11}^{-1} R_{12}$, тем, что его компоненты зависят от матрицы C_{11}^+ , содержащей нами введенные знания. Индикаторы присутствия знаний были заложены в нее. Зависящая от матрицы C_{11}^+ корреляционная матрица $R_{11}^+ = C_{11}^+ \Lambda_{11}^+ C_{11}^{+T}$ теперь также является C_{11}^+ -источником знаний. Ограниченных знаний, как мы убедились на примере. Формула для подматрицы (вектора) R_{12}^+ в ООМ МЛРА принимает вид $R_{12}^+ = R_{11}^+ \beta = C_{11}^+ \Lambda_{11}^+ C_{11}^{+T} \beta$. И мы видим, что и подматрица R_{11}^+ и подматрица (вектор) R_{12}^+ зависят от C_{11}^+ , содержащей математически введенные знания [1].

Теперь ОМ МЛРА изобразим по-другому, показывая матрицу C_{11}^+ : $(R_{11}^+, C_{11}^+, \Lambda_{11}^+) \Rightarrow (Y_{m(n-1)}^{(t)}, Z_{m(n-1)}^{(t)}), t=1, \dots, K_t < \infty$, а подзадачу 3 $(R_{11}^+, \beta) \Rightarrow R_{12}^+$.

Результат решений трех подзадач обозначается в виде: $(m, n, \varphi_{11}, \beta, C_{11}^+) \Rightarrow (R_{11}^+, R_{12}^+, Z_1^+, Z_2^+)$.

Теоретические подробности и практические рекомендации по эксплуатации программы-таблицы изложены в статье [1].

Необходимо во всех формулах проверять точность равенства левой части формулы ее правой части во всех матричных равенствах нашей модели. Например, по условию ООЗ МЛРА элементы из подматрицы $R_{12}^{(t)} = R_{11}^{(t)} \beta$ должны удовлетворять равенству $R_{12}^{(t)} = (1/m) Z_{m(n-1)}^{(t)T} Z_2$. Это матричное уравнение должно точно выполняться численно. Таблицы числовых значений всех матриц из модели демонстрируют все матричные равенства. Эти же таблицы участвуют при обратном процессе извлечения введенных знаний с применением когнитивного моделирования.

Когнитивные смыслы валидных и моделируемых показателей моральных качеств

Смыслы моделируемых z -переменных, линейно входящих в валидные переменные y_1, y_2, y_3, y_4 , не имеют смысловых противоречий. Только 2 z -переменные z_3, z_5 двойкою (бинарно) именуется

по смыслу. Речь идет об смыслах $\text{смысл}(y_1, z_5) = \text{«честность»}$ и $\text{смысл}(y_1, z_3) = \text{«порядочность»}$. Назначение нами для пар смыслов («честность», «анти честность») пар (y, z) -смыслов при $y_1 \neq y_4$: $\text{смысл}(y_1, z_5) = \text{«честность»}$ и $\text{смысл}(y_4, z_5) = \text{анти честность}$, обосновано противоположностью знаков $(+/-)$ при значениях коэффициентов c_{15}, c_{45} : $\text{corr}(y_1, z_5) = c_{15} = 0.5$, $\text{corr}(y_4, z_5) = c_{45} = -0.5$. Аналогично обосновывается назначение смыслов в паре («порядочность», «антипорядочность»).

Наши 6 z -переменные $z_1, z_2, z_3, z_4, z_5, z_6$ заметно коррелированы попарно, а одна z -переменная z_6 линейно зависит от остальных z -переменных z_1, z_2, z_3, z_4, z_5 : $z_6 = \beta_1 z_1 + \beta_2 z_2 + \dots + \beta_5 z_5$. Матрицу Z_1^+ z -переменных z_1, z_2, z_3, z_4, z_5 мы смоделировали выше. Обсудим и экспертно назначим значения компонент для заданного нами вектора β и вычислим матрицу $Z_2^+ = Z_1^+ \beta$.

Назначенные и моделируемые значения регрессионных коэффициентов

Содержательный смысл z -переменных $z_1, z_2, z_3, z_4, z_5, z_6$ подсказывает нам: $\text{смысл}(y_3, z_6) = \text{«стремится обмануть, а не добросовестно сделать что-либо»}$ образован из суммы смыслов 5 z -переменных z_1, z_2, z_3, z_4, z_5 и знаки при коэффициентах регрессии равны знаку «+». Вероятнее всего все знаки при коэффициенте $\beta = (\beta_1, \dots, \beta_{n-1})^T$, имеют знак +. Каждое j -ое значение $(\beta_1, \dots, \beta_{n-1})^T$ равно значению приращения к $F(z_6+1)$ при увеличении на +1 значения j -ой z -переменной z_j : $F(z_6+1) = F(z_6) + \beta_j$. Упорядочим по убыванию наши субъективные значения β_1, \dots, β_5 . Самым большим назначим значение β_3 . Из всех смыслов мы считаем большим по весу «антипорядочность», а самым малым - значение β_2 , ибо «низкая зарплата» при высокой безработице стало обычным явлением в Республике Казахстан. Остальные значения $\beta_3, \beta_1, \beta_4, \beta_5$, упорядочим аналогичным образом. Зафиксируем разницу между значениями наибольшего и наименьшего значений. После всех рассуждений и дискуссий имеем следующие значения β_1, \dots, β_5 : $\beta_1 = 4, \beta_2 = 1, \beta_3 = 5, \beta_4 = 2, \beta_5 = 3$. Это - назначенные значения. Далее вычисляем значения зависимой z -переменной z_6 по формуле и нормируем значения z -переменной z_6 так, чтобы ее стандартное отклонение стало равным 1. Условие равенства нулю ее средней арифметической выполняется автоматически. А ее стандартное отклонение не равно 1, ибо наши назначенные значения коэффициентам регрессии $\beta_1 = 4, \beta_2 = 1, \beta_3 = 5, \beta_4 = 2, \beta_5 = 3$ не соответствуют значениям стандартизованных z^+ -переменных. Они должны им соответствовать, но не соответствуют, так как ее значения назначены независимо от значений независимых z -переменных. В ПЗ МЛРА значения коэффициентов регрессии зависят от значений z -

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переменных, так как они вычисляются только если известна матрица значений всех 6 z-переменных. В нашей рассматриваемой ОЗ МЛРА матрица значений z⁺-переменных неизвестна. Элементы матрицы значений Z⁺_{20,6}=[Z⁺₁|Z⁺₂] 6 z⁺-переменных мы моделируем по частям – сперва Z⁺₁, потом - Z⁺₂=Z⁺₁β. Так как при назначении значений коэффициентов регрессии β₁,...,β₅ мы не учитывали их зависимость вида Z⁺₂=Z⁺₁β от значений 5 z-переменных z₁,...,z₅, то имеем другую зависимость вида X⁺₂=Z⁺₁β, где дисперсия x-переменной не равна 1: s_x²=(x²_{1n}+x²_{2n}+...+x²_{mn})/m≠1, n=6, m=20.

Стандартизацию значений x-переменной № 6 (n=6, m=20) проводим делением ее значений на число s_x=0.09211. Дисперсия новой z-переменной теперь равна 1: s_z²=(z²_{1n}+z²_{2n}+...+z²_{mn})/m=1, n=6, m=20. Эти стандартизованные значения z⁺-

переменной (расположены в столбце №6 матрицы Z⁺_{mn}=[Z⁺₁|Z⁺₂], Таблица 6, столбец №8) образуют подматрицу Z⁺₂=(z⁺_{1n}, z⁺_{2n}, ..., z⁺_{mn})^T, n=6, удовлетворяющую соотношению Z⁺₂=Z⁺₁β.

Наша программа-таблица обеспечивает совпадение значений элементов здесь смоделированных матриц с значениями элементов матриц, полученных при когнитивном моделировании извлечения введенных знаний, что будет видно, если вычислить по модельной матрице (Таблица 7). В Таблице 4 приведены вычисленные нестандартизованные значения z-переменной z₆, вычисленные по формуле z₆=β₁z⁺₁+β₂z⁺₂+...+β₅z⁺₅ из ОМ МЛРА (значения z⁺-переменных z⁺₁, z⁺₂, ..., z⁺₅ являются решениями ОСЗ для МЛРА). Нормированные значения z⁺-переменной z⁺₆, представлены в 6-ом столбце матрицы (Таблица 6, столбец 8).

Таблица 1. Модельные значения элементов матрицы собственных векторов C⁺₅₅ и назначенные значения |c⁺_{kj}|>c_j компонент собственных векторов

	c ₁	c ₂	c ₃	c ₄	c ₅	c _i c ^T _i =1
	1	2	3	4	5	6
ROW 1	0,3751292	-0,5000000	-0,6500000	0,0000000	-4,32E-01	1,0000
ROW 2	0,5156684	-0,4000000	0,2721876	0,5000000	5,00E-01	1,0000
ROW 3	0,5000000	-0,5000000	0,1205965	0,5000000	-4,85E-01	1,0000
ROW 4	0,3055556	-0,5000000	0,5606486	-0,5000000	-3,04E-01	1,0000
ROW 5	0,5000000	0,5000000	-0,1205965	-0,5000000	-4,85E-01	1,0000
c ^T _j c _j =1	1,0000	1,16000	0,8400	1,0000	1,0000	
Λ ⁺ ₁₁	1,8978	1,05373	1,05373	0,86461	0,13012	5
	1	2	3	4	5	
Λ ₁₁	1,8978	1,12782	0,79232	0,64513	0,53692	5,000001
Назначенные значения c⁺_{kj} > c_j, j=1,2,3,4,5						
c ₅₁	0,5					
c ₃₁	0,5					
c ₁₂	-0,5000					
c ₂₂	-0,4000					
c ₃₂	0,5000					
c ₄₂	-0,5000					
c ₅₂	0,5000					
c ₁₃	-0,6500					

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C24	0,5000
C34	0,5000
C44	-0,5000
C54	-0,5000
C25	0,5000

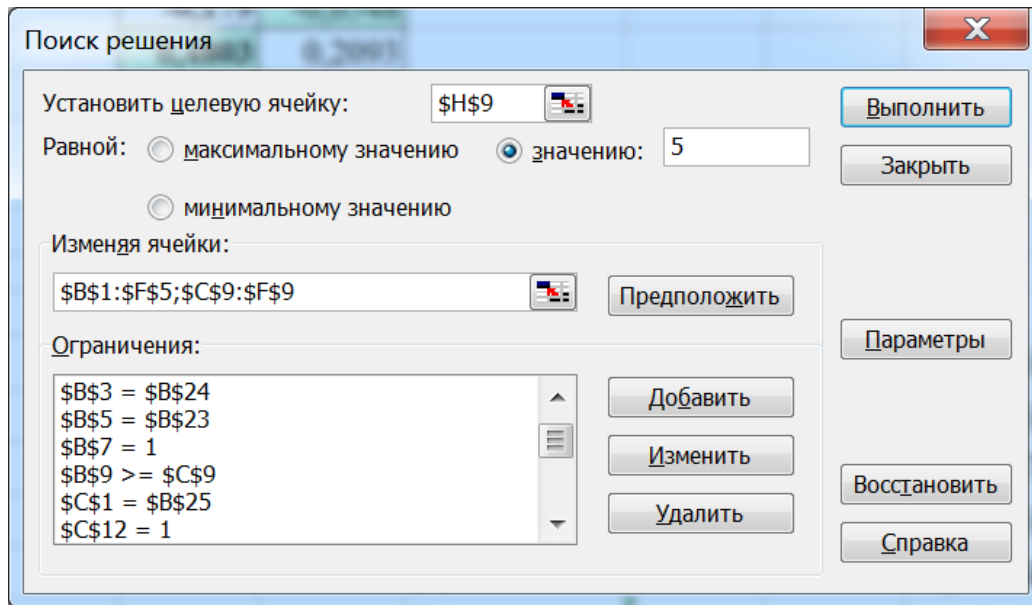


Рисунок 1. Окно процедуры «Поиск решения» в ЭТ Excel

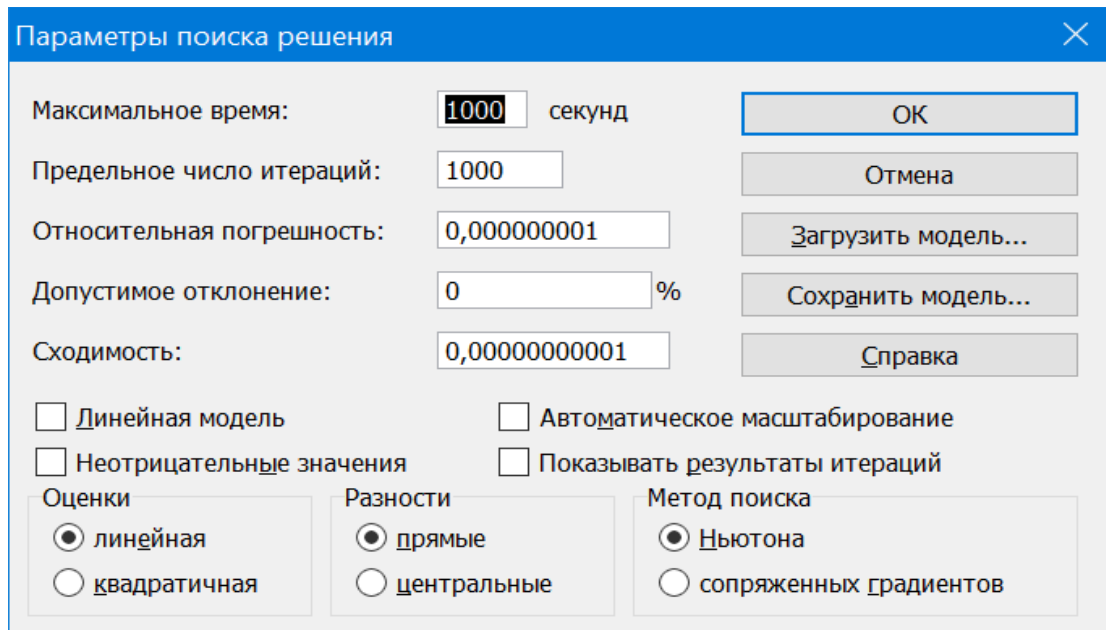


Рисунок 2. Значения параметров, применявшихся в процедуре «Поиск решения» в ЭТ Excel

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Таблица 2. Вычисленные значения коэффициентов регрессии $\beta=(\beta_1,\dots,\beta_5)^T$ для модельной (β, C^{+55}) -выборки $Z^{+20,6}=[Z^{+1} | Z_2]$, $Z_2=Z^{+1}\beta$

ВЫВОД ИТОГОВ

Регрессионная статистика

Множественный R	1
R-квадрат	1
Нормированный R-квадрат	0,93333333
Стандартная ошибка	1,18171E-15
Наблюдения	20

Дисперсионный анализ

	df	SS	MS	F	Значимость F
Регрессия	5	2357,55421	471,5108414	3,37653E+32	4,8013E-224
Остаток	15	2,0947E-29	1,39644E-30		
Итого	20	2357,55421			

	Коэффициенты	Стандартная ошибка	t-статистика	P-Значение	Нижние 95%	Верхние 95%	Нижние 95,0%	Верхние 95,0%
Y-пересечение	0							
Переменная z 1	4	2,49728E-15	1,60174E+15	1,1441E-220	4	4	4	4
Переменная z 2	1	8,52559E-15	1,17294E+14	1,2252E-203	1	1	1	1
Переменная z 3	5	9,77468E-15	5,11525E+14	3,1213E-213	5	5	5	5
Переменная z 4	2	2,81212E-15	7,11207E+14	2,2254E-215	2	2	2	2
Переменная z 5	3	2,29027E-15	1,30989E+15	2,3379E-219	3	3	3	3

Таблица 3. Вычисленные (предсказанные по ПМ МЛРА) значения нестандартизованной - z переменной $z_6=\beta_1z^{+1}+\beta_2z^{+2}+\dots+\beta_5z^{+5}$, при $\beta_1=4,\beta_2=1,\beta_3=5,\beta_4=2,\beta_5=3$ (процедура Регрессия из надстройки Анализ данных ЭТ Excel)

ВЫВОД ОСТАТКА		
№ наблюдения	Предсказанное Y	Остатки
1	-7,4847500000	0,0000000000
2	3,1696350000	0,0000000000

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3	-4,6315300000	0,0000000000
4	8,7188615000	0,0000000000
5	30,9865000000	0,0000000000
6	-4,8289340000	0,0000000000
7	-0,3864900000	0,0000000000
8	2,4733100000	0,0000000000
9	18,0439000000	0,0000000000
10	3,1895400000	0,0000000000
11	2,2764100000	0,0000000000
12	-11,2819000000	0,0000000000
13	-14,2681100000	0,0000000000
14	-11,8772550000	0,0000000000
15	-7,7794300000	0,0000000000
16	-4,8824580000	0,0000000000
17	-7,7289500000	0,0000000000
18	-10,0166700000	0,0000000000
19	5,5096070000	0,0000000000
20	10,7989400000	0,0000000000

Таблица 4. Вычисленные нестандартизованные значения z-переменной z₆ (формула z₆=β₁z⁺₁+β₂z⁺₂+...+β₅z⁺₅из ОМ МЛРА, значения z⁺-переменных z⁺₁,z⁺₂,...,z⁺₅ являются решениями ОСЗ для МЛРА)

<i>Наблюдение</i>	1	2	3	4	5	6	7	8	9	10
модельное значение	- 7,484 750	3,1696 35	- 4,6315 30	8,7188 62	30,986 500	- 4,828 934	- 0,386 490	2,4733 10	18,043 900	3,1895 40
<i>Наблюдение</i>	11	12	13	14	15	16	17	18	19	20
модельное значение	2,276 410	- 11,281 900	- 14,268 110	- 11,877 255	- 7,7794 30	- 4,882 458	- 7,728 950	- 10,016 670	5,5096 07	10,798 940

Исходные заданные экспертом значения коэффициентов регрессии β₁,β₂,β₃,β₄,β₅ задают пропорциональные зависимости между их значениями. Это удобно эксперту, так как наличие равного 1 коэффициента, например, β₂=1, задает шаговое значение сравнения с другими значениями коэффициентов регрессии, больших 1. Другие значения коэффициентов регрессии дают назначенные экспертом аддитивные приращения, аддитивно отличающиеся от β₂=1, что соответствует содержательному смыслу значения коэффициента регрессии F(z_j+1)=F(z_j)+β_j. Равенство F(z₂+1)=F(z₂)+β₂ является «точкой отсчета», значения остальных коэффициентов регрессии пропорциональны значению β₂=1, они все больше 1. Ниже мы рассматриваем случай, когда β₂=1 является минимальным коэффициентом регрессии, дающим минимальное приращение значению зависимой z-переменной z₆: z₆=F(z₂+1)=F(z₂)+β₂.

Исходные значения β₁=4, β₂=1, β₃=5, β₄=2, β₅=3 удобны для конструирования фраз когнитивных смыслов, но они были преобразованы при нормировании z-переменной №6.

Нас интересует значение коэффициента преобразования одной совокупности коэффициентов регрессии в другую совокупность коэффициентов регрессии при стандартизованных значениях z⁺-переменных z⁺₁,z⁺₂,...,z⁺₅. Зная нашу модельную матрицу [Z⁺₁|Z⁺₂], Z⁺₂= Z⁺₁β мы вычислили коэффициенты регрессии β⁺₁,...,β⁺₅. Они отличаются от прежних коэффициентов регрессии. При этом использовали процедуру *Regression* в ЭТ Excel. Это является реализацией ПМ МЛРА, при этом, как ожидалось, получили те же матрицы R⁺₁₁, R⁺₁₂,R⁺₂₂=(1), определяемые по формулам (1\20)Z⁺₁^TZ⁺₁=R⁺₁₁,(1\20)Z⁺₁^TZ⁺₂=R₁₂, (1\20)Z⁺₂^TZ⁺₂= R⁺₂₂=(1) и являются разбиениями

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корреляционной матрицы $R^{+}_{66}=(1\sqrt{20}) Z^{+T}_{20,6n}Z^{+}_{20,6}$, соответствующих разбиению $Z^{+}_{mn}=[Z^{+}_1|Z^{+}_2]$.

Вычисленные значения регрессионных коэффициентов $\beta^{+}_1=0,368420804$, $\beta^{+}_2=0,092105201$, $\beta^{+}_3=0,460526005$, $\beta^{+}_4=0,184210402$, $\beta^{+}_5=0,276315603$ являются решением ПЗ МЛРА из ПМ МЛРА: $Z^{+}_{mn}=[Z^{+}_1|Z^{+}_2]=>(R^{+}_{11},R^{+}_{12},\beta^{+})$, где для уже известных модельных матриц реализована ПМ МЛРА: $Z^{+}_{mn}=[Z^{+}_1|Z^{+}_2]=>(R^{+}_{11},R^{+}_{12},\beta^{+})$, Таким образом мы убедились в равенствах матриц $Z^{+}_{mn}=[Z^{+}_1|Z^{+}_2,R^{+}_{11},R^{+}_{12},\beta^{+}$, численно вычисленных в ПМ МЛРА и в ОМ МЛРА.

Для нашего экспертного набора коэффициентов регрессии β_1, \dots, β_5 $\beta_1=4, \beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3$ и нового набора коэффициентов регрессии $\beta^{+}_1, \dots, \beta^{+}_5$ мы нашли значение коэффициента преобразования 0.092105201 (Таблица 8)-оно является наименьшим коэффициентом регрессии $\beta^{+}_2 = \min\{\beta^{+}_1, \dots, \beta^{+}_5\} = 0,092105201, j=1, \dots, 5$. Если нас устраивает набор коэффициентов регрессии β_1, \dots, β_5 такой, что $\beta_1=4,$

$\beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3$, то в ОМ МЛРА им соответствует модельный набор коэффициентов регрессии $\beta^{+}_1=\beta_1*\beta^{+}_2=0.368420804$; $\beta^{+}_2==\beta_2 *\beta^{+}_2 =0.092105201$; $\beta^{+}_3=\beta_3*\beta^{+}_2=0.460526005$; $\beta^{+}_4=\beta_4*\beta^{+}_2 =0.184210402$; $\beta^{+}_5=\beta_5*\beta^{+}_2=0.276315603$.

Мы облегчили для эксперта подбор значений коэффициентов регрессии. На примере показали, что для любого набора значений $\beta^{+}_1, \dots, \beta^{+}_5$ (коэффициентов регрессии при стандартизованных z^{+} -переменных $z^{+}_1, z^{+}_2, \dots, z^{+}_5$) существует единственный набор «экспертных» коэффициентов регрессии β_1, \dots, β_5 при смыслах независимых z^{+} -переменных $z^{+}_1, z^{+}_2, \dots, z^{+}_4, z_5$ для смысла одной нестандартизованной зависимой z -переменной z_6 .

Теперь после этапа математического введения знаний и этапа назначения желаемого набора коэффициентов регрессии $\beta^{+}_1, \dots, \beta^{+}_5$ мы приступим к обратному процессу – к шагам этапа когнитивного извлечения введенных ранее знаний.

Таблица 5.

1	Значения коэффициентов регрессии $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$				
	2	3	4	5	6
Заданные экспертом	$\beta_1=4$	$\beta_2=1$	$\beta_3=5$	$\beta_4=2$	$\beta_5=3$
Вычисленные процедурой Regression в ЭТ Excel значения коэффициентов регрессии при модельных стандартизованных z -переменных $z^{+}_1, z^{+}_2, \dots, z^{+}_5$, определяющих 20 значений одной нестандартизованной z -переменной $z_6 = \beta_1 z^{+}_1 + \beta_2 z^{+}_2 + \dots + \beta_5 z^{+}_5$ ($Z_2 = Z^{+}_1 \beta$, Таблица 4)	$\beta^{+}_1=4$	$\beta^{+}_2=1$	$\beta^{+}_3=5$	$\beta^{+}_4=2$	$\beta^{+}_5=3$
Вычисленные в ПМ МЛРА значения коэффициентов регрессии при модельных стандартизованных z -переменных $z^{+}_1, z^{+}_2, \dots, z^{+}_5$, определяющих значения стандартизованной z -переменной $z^{+}_6 = \beta^{+}_1 z^{+}_1 + \beta^{+}_2 z^{+}_2 + \dots + \beta^{+}_5 z^{+}_5$	$\beta^{+}_1=0,368420804$	$\beta^{+}_2=0,092105201$	$\beta^{+}_3=0,460526005$	$\beta^{+}_4=0,184210402$	$\beta^{+}_5=0,276315603$

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$Z^+_2 = Z^+_1\beta^+$, Таблица 6, столбец 8).					
Формула связи β^+_j с β_j $\beta^+_j = \beta_j * \min\{\beta^+_1, \dots, \beta^+_n\}$, $j=1, \dots, 5$	$\beta^+_1 = \beta_1 / \beta^+_2 =$ 0,368420804	$\beta^+_2 = \beta_2 / \beta^+_2 =$ 0,092105201	$\beta^+_3 = \beta_3 / \beta^+_2 =$ 0,460526005	$\beta^+_4 = \beta_4 / \beta^+_2 =$ 0,184210402	$\beta^+_5 = \beta_5 / \beta^+_2 =$ 0,276315603

Таблица 6. Модельные значения элементов подматриц $Z^+_1|Z^+_2$ из матрицы $Z^+_{mn} = [Z^+_1|Z^+_2]$, имеющих заданные значения компонент вектора коэффициентов регрессии $\beta^+ = (\beta^+_1, \dots, \beta^+_3)^T$

z-переменные, удовлетворяющие уравнению регрессии $Z^+_2 = Z^+_1\beta^+$							
	№	z^+_1	z^+_2	z^+_3	z^+_4	z^+_5	z^+_6
1	2	3	4	5	6	7	8
ROW	1	-7,319900E-01	-4,857400E-01	-4,668500E-01	2,192300E+00	2,031700E-01	-0,6893844
ROW	2	-1,962300E-01	6,876200E-01	6,970900E-02	8,142700E-01	7,612700E-02	0,291939868
ROW	3	1,479400E-01	-9,498400E-02	7,043700E-02	-1,913600E+00	1,526000E+00	-0,426588
ROW	4	1,464000E+00	-7,894800E-01	-6,551100E-02	-4,476700E-01	9,825000E-01	0,80305249
ROW	5	2,455400E+00	1,515600E+00	1,409900E+00	7,070400E-01	1,722900E+00	2,854017808
ROW	6	-1,099300E+00	2,345900E-01	-6,229100E-01	-4,457200E-01	4,128900E-02	-0,44476994
ROW	7	6,926500E-01	-9,662700E-01	-5,374600E-01	-1,443700E+00	-1,929000E-02	-0,03559774
ROW	8	2,164100E-01	6,279000E-02	3,316300E-01	-3,392200E-01	2,810700E-01	0,227804714
ROW	9	1,444600E+00	1,186600E+00	1,798200E+00	1,037800E+00	9,131400E-01	1,661937035
ROW	10	-2,397500E-01	1,134000E+00	8,509000E-01	-7,057100E-01	-4,179600E-01	0,293773223
ROW	11	1,144900E+00	-1,644500E-01	-6,312900E-02	-2,158000E-01	1,357400E+00	0,2096692
ROW	12	-1,042000E+00	1,512900E+00	1,797800E+00	-8,986500E-01	8,177100E-01	1,03912167
ROW	13	-9,210600E-01	2,325600E+00	2,337100E+00	1,259100E+00	9,887000E-01	1,31416714
ROW	14	1,205000E+00	-1,094000E-01	5,297900E-02	-6,887800E-01	-7,782900E-01	-1,09395696
ROW	15	-6,065900E-01	-2,017600E-01	2,382100E-01	7,019500E-01	-4,405800E-01	-0,71652596
ROW	16	-4,529500E-01	7,584200E-01	5,990200E-01	7,692700E-01	1,564200E+00	-0,44969978
ROW	17	2,798000E-01	-9,469800E-01	-6,650600E-01	7,601100E-01	1,196400E+00	-0,71187649
ROW	18	1,397900E+00	-4,873200E-01	1,047000E+00	-1,181400E-01	3,582300E-01	-0,9225874

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ROW	19	1,794900E-01	1,411900E+00	1,079900E+00	2,513400E-01	-9,364700E-01	0,50746346
ROW	20	-1,325700E-01	1,093500E+00	1,102000E+00	1,242000E+00	1,851800E+00	0,994638538
average		0,00000	0,00000	0,00000	0,00000	0,00000	0,00000
st deviation		1,00000	1,00000	1,00000	1,00000	1,00000	1,00000

Извлечение знаний проведем аналогично изложенному в статье [2].

Поменяем значения выделенных элементов из матрицы собственных векторов C^{+11} (Таблица 1) на назначенные экспертом значения. Реализуем программу-таблицу (Таблица 1, Рисунки 1,2). Элементы из матрицы собственных векторов C^{+11} изменились, а значения выделенных элементов не изменились: они являются математически введенными индикаторами наличия знаний. Соответствующая ей матрица собственных чисел $\Lambda^{+11} = \text{diag}(1.8978, 1.05373, 1.05373, 0.86461, 0.13012)$ также является результатом математического решения Оптимизационной Задачи и предварительного приведения (добавления) знаний в C^{+11} путем внесения заметных значений (Таблица 1). Покажем как эти значения когнитивно моделируют смыслы. Сперва были [2] назначены доли информации для 4-х типов валидных показателей y_1, y_2, y_3, y_4 «глубинного» морального сознания. Будем считать их соответствующих «смыслам» (направлений деятельности) 4-х ниже описанных департаментов. Для каждого из них мы смоделировали 2, 5, 1, 3 z^+ -переменных из их общего числа: $z^+_1, z^+_2, \dots, z^+_5$. Каждый из 2-членных, 5-членных, 1-членных, 3-членных отделов (subdivisions) имеет свой валидный «смысл», равный сумме смыслов z^+ -переменных с значимыми смыслами весомых значений компонентов соответствующего собственного вектора.

Наши z^+ -переменные удовлетворяют соотношениям ПМ МЛРА, ОМ МЛРА и ОМ ГК, при этом 5 z^+ -переменные функционально зависят от одной z^+ -переменной z^+_6 , смысл z^+_6 когнитивно определен в [16] и сформулирован так: $\text{смысл}(z^+_6) = \text{«стремится обмануть, а не добросовестно сделать что-либо»}$. $\text{Смысл}(z^+_6) = \text{«стремится обмануть, а не добросовестно сделать что-либо»}$ когнитивно сформулирован 1 раз как смысл z^+ -переменной, являющегося частью смысла валидной y -переменной y_3 (Таблица 5, строка 3, столбец 5). Зависимость смысла z^+_6 от смысла y -переменной y_3 обозначено так: $\text{смысл}(y_3, z^+_6) = \text{«стремится обмануть, а не добросовестно сделать что-либо»}$. Смыслы новых z^+ -переменных (из ОМ МЛРА) мы

приравняли к смыслам прежних z -переменных (из ОМ ГК). Но в ОМ МЛРА z^+ -переменные подчинены уравнению регрессии $z^+_6 = \beta^+_1 z^+_1 + \beta^+_2 z^+_2 + \dots + \beta^+_5 z^+_5$ и смысл z^+ -переменной z^+_6 равен сумме смыслов не всех 5 z^+ -переменных. Смысл z^+ -переменной z^+_6 зависит от числа значимых коэффициентов регрессии. Такими коэффициентами являются 3 ($\beta_3=5, \beta_1=4, \beta_5=3$) из 5-ти ($\beta_1=4, \beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3$) назначенных нами коэффициентов регрессии.

Новые добавляемые смыслы обозначим как $\text{Смысл}(z^+_6; \beta_3, \beta_5), \text{Смысл}(z^+_6; \beta_1=4, \beta_2=4, \beta_3=3, \beta_4=2, \beta_5=3), \text{Смысл}(z^+_6; \beta_1), \text{Смысл}(z^+_6; \beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3)$.

Перейдем к этапу когнитивного извлечения знаний. Когнитивный смысл передаем фразой из 3 слов. Кортеж ($\beta_1=5, \beta_2=4, \beta_3=3$) с тремя смыслами (казнить нельзя помиловать) озвучивается фразой «помилования ($\beta_3=3$) не добившиеся ($\beta_2=4$) казненные ($\beta_1=5$)». Кортеж ($\beta_1=5, \beta_2=4, \beta_3=3$) с тремя смыслами (помиловать нельзя казнить) озвучивается фразой «казни ($\beta_3=3$) избежавшие ($\beta_2=4$) помилованные ($\beta_1=5$)». Перед существительным стоят 2 прилагательные с возрастающей силой ($\beta_5=3$ и $\beta_1=4$).

Такой «стандарт» свободен от разночтений, стилистически несовершенен, но упрощает когнитивный выбор смыслов и уменьшает степень субъективизма, присущего когнитивному моделированию [18], впервые примененный формализации описаний ситуаций в политологии с многосмысловыми фразами, даже противоречащие общепринятой фразе.

В применяемой в этой статье «грамматике» фразы не являются выбором регулярных выражений для когнитивных смыслов. Они не аналогичны по возможностям использующимся некоторыми текстовыми редакторами и утилитами способу поиска и подстановки текста. В способ поиска и подстановки текста «при помощи регулярных выражений можно задать шаблоны, позволяющие: найти все последовательности символов «кот» в любом контексте, как то: «кот», «котлета», «терракотовый»; найти отдельно стоящее слово «кот» и заменить его на «кошка»; найти слово «кот», которому предшествует слово «персидский» или «чеширский»; убрать из текста

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все предложения, в которых упоминается слово кот или кошка»⁵. Регулярные грамматики (в нашем случае - праволинейная грамматика) являются подмножеством контекстно-свободных. Такой «стандарт» не связан с типами грамматик - контекстно-свободный или контекстно-зависимый⁶.

Когнитивная модель структуры муниципального органа по мониторингу моральной среды для подвидов человеческих ресурсов

Когнитивная модель структуры муниципальных органов по мониторингу моральной среды для видов человеческих ресурсов состоит из 4-х валидных моральных показателей, из 12 показателей, соответствующих своему валидному моральному показателю, из 6 показателей, обладающих суммарным смыслом той или иной части из вышеназванных смыслов 12 показателей.

Ниже показаны обоснования для учреждения 4-х Департаментов мониторинга моральной среды у человеческих ресурсов, в состав которых целесообразно включить 12 узких специалистов, объединенных в 6 отделов. Число специалистов одного вида (из 12) должно быть кратно фактической нагрузке. Вопросы нормирования труда каждого специалистов и вопрос оплаты их работы мы не рассматриваем.

Дополнительных знаний, в присутствии которых мы уверены, зная «коэффициенты регрессии, содержащие... когнитивно извлекаемые знания» [1], существует 6 – по одному на каждое собственное число $\lambda_1, \lambda_2, \lambda_3, \lambda_4, \lambda_5, \lambda_6$. Их смыслы выражают смыслы регрессионных коэффициентов в линейных комбинациях m значений z^+ -переменной $z^+ = \beta^+ z^+_1 + \beta^+ z^+_2 + \dots + \beta^+ z^+_5$. Смыслы $\beta^+ z^+_1, \beta^+ z^+_2, \dots, \beta^+ z^+_5$ отличаются от смыслов линейных комбинаций с «весами» $c_{1j}, c_{2j}, \dots, c_{nj}$ (компонентами j -го собственного вектора) при каждой из n z^+ -переменных. «Весы» подчиняются как равенству $c^2_{1j} + c^2_{2j} + \dots + c^2_{nj} = 1$, так и равенству $c^2_{11} + c^2_{12} + \dots + c^2_{1n} = 1$. Эти «весы» определяют другую систему y -переменных, имеющих смыслы валидных переменных [6] с известными смыслами, влияющими на все смыслы других вышеназванных переменных и смыслы разных сумм коэффициентов регрессии.

К ранее извлеченным знаниям по модели ОМ ГК добавим новые знания (смыслы), извлеченные при помощи ОМ МЛРА. Новые смыслы

когнитивно извлекаем из регрессионных уравнений, содержащих разные совокупности коэффициентов регрессии. Они таковы, что их смыслы когнитивно равны смыслу Смысл(z^+_{6} ; «влияющие коэффициенты регрессии») = «стремится обмануть, а не добросовестно сделать что-либо», где вместо слов «влияющие коэффициенты регрессии» дан перечень коэффициентов регрессии, присутствующих в регрессионном уравнении для зависимой переменной z^+_{6} , используемого при когнитивном определении суммарного смысла Смысл(z^+_{6} ; «влияющие коэффициенты регрессии») = «стремится обмануть, а не добросовестно сделать что-либо» является левой частью формируется как элемент левой части праволинейной грамматики, а правая часть из суммы фраз учитывающих значение каждого коэффициента корреляции.

Смысл($z^+_{6}; \beta_3, \beta_5$) когнитивно определяем так. В валидной переменной y_1 (ее вес равен 37.96%, $\lambda_1 = 1.8978$) в правую часть нами вложены в 2 компоненты 1-го собственного вектора 2 весомых значений: $\text{сог}(y_1, z_5) = c_{51} = 0.5$, $\text{сог}(y_1, z_3) = c_{31} = 0.5$. Наличие валидной переменной y_1 (из-за наличия математического равенства $y^+_{ij} = z^+_{i1}c^+_{1j} + \dots + z^+_{i5}c^+_{5j}$, $j=1, \dots, 5, i=1, \dots, 20$, $z^+_{6} = \beta^+_1 z^+_1 + \beta^+_2 z^+_2 + \dots + \beta^+_5 z^+_5$) когнитивно моделирует смыслы z -переменным z^+_3, z^+_5 . Смысл(y^+_1, z^+_5) = «честность», Смысл(y^+_1, z^+_3) = «порядочность» [2]. Смысл z^+ -переменной z^+_6 зависит от числа значимых коэффициентов регрессии. Такими коэффициентами являются 2 ($\beta_3=5, \beta_5=3$) из 3-х значимых ($\beta_1=4, \beta_3=5, \beta_5=3$). Всего их 5: ($\beta_1=4, \beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3$).

Наличие валидной переменной y^+_2 когнитивно моделирует смыслы z^+ -переменным $z^+_1, z^+_2, \dots, z^+_5$. Эти смыслы не меняются, меняются лишь степени выраженности смыслов. Измеренные нами силы смыслов должны изменяться как по времени, так и по местам их измерения. Следующие 5 z^+ -переменных $z^+_1, z^+_2, \dots, z^+_5$ функционально связаны с y^+_2 -переменной y^+_2 (из-за наличия математического равенства $y^+_{ij} = z^+_{i1}c^+_{1j} + \dots + z^+_{i5}c^+_{5j}$, $j=1, \dots, 5, i=1, \dots, 20$) и имеют когнитивные смыслы: Смысл(y^+_2, z^+_1) = «лицо низкой социальной активности», Смысл(y^+_2, z^+_2) = «низкая зарплата», Смысл(y^+_2, z^+_3) = «порядочность», Смысл(y^+_2, z^+_4) = «проявление деспотизма», Смысл(y^+_2, z^+_5) = «честность».

Наличие валидной переменной y^+_4 когнитивно моделирует смысл z^+ -переменной z^+_5 .

⁵ www.wikipedia.org/wiki/Регулярные_выражения

⁶ Хопкрофт Д., Мотвани Р., Ульман Д. Введение в теорию автоматов, языков и вычислений, 2-е изд.

:Пер. с англ.-Москва, Издательский дом «Вильямс», 2002. -528 с.

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ее смысл(y^+_{4,z^+_5})=античестность, а величину его выраженности мы назначили равной 0.5: $c_{25}=0,5000$.

Все математически введенные (субъективно назначенные) значения весомых индикаторов присутствия знаний (смыслов z -переменных $z^+_{1,z^+_2,\dots,z^+_5}$) выступают в виде точных равенств из ООЗ МЛРА. В соответствии с математической моделью ООМ МЛРА и этапа назначения желаемого набора коэффициентов регрессии $\beta^+_{1,\dots,\beta^+_5}$ мы приступим к обратному процессу – к этапу когнитивного извлечения введенных ранее знаний. Извлечение знаний проведем аналогично изложенному в статье [2].

Так как смысл(y^+_{1,z^+_5})=«античестность», смысл (y^+_{1,z^+_3})=«порядочность», то Смысл(z^+_{6,β_3,β_5})= честная порядочность (в отличие от демонстративной порядочности). Этот смысл извлекаем из соотношения: $\text{Смысл}(\beta_1 z^+_{11} + \beta_2 z^+_{22} + \dots + \beta_5 z^+_{55}) = \text{Смысл}(\beta_1 z^+_{11}) + \text{Смысл}(\beta_2 z^+_{22}) + \text{Смысл}(\beta_3 z^+_{33}) + \text{Смысл}(\beta_4 z^+_{44}) + \text{Смысл}(\beta_5 z^+_{55})$.

Смысл($z^+_{6;\beta_3,\beta_5}$) когнитивно определяем так. В левой части смыслового равенства имеем смысл (y_{3,z_6})=«стремится обмануть, а не добросовестно сделать что-либо». В правой части смыслового равенства имеем смысл, равный линейной комбинации 2-х смыслов $\text{Смысл}(z^+_{6;\beta^+_{1,\dots,\beta^+_5}}) = \text{Смысл}(z^+_{6;\beta_1,\dots,\beta_5})$.

Ниже будем применять удобное смысловое равенство, зависящее от коэффициентов регрессии β_1,\dots,β_5 . $\text{Смысл}(z^+_{6;\beta_3,\beta_5}) = 5*[\text{«антипорядочность»}] + 3*[\text{«античестность»}] = \text{нечестная преступная анти порядочность}$. Заметим, что честная порядочность отличается от демонстративной порядочности.

Для валидной переменной y^+_{1} 37,96% ($\lambda^+_{11}=1.8978$) извлеченных знаний отражено в смысле $\text{Смысл}(z^+_{6;\beta_3=5,\beta_5=3}) = \text{«честная порядочность»}$. В других извлекаемых нами знаниях отражаются негативные смыслы. Их объемы равны 21.07%, 21.07%, 17.29%, 2.60%.

Для валидной переменной y^+_{2} зависимая z^+ -переменная z^+_6 в правой части смыслового равенства имеет смысл, равный сумме 5 смыслов. Это обусловлено наличием математического равенства $y^+_{ij} = z^+_{i1}c^+_{1j} + \dots + z^+_{i5}c^+_{5j}$, $j=1,\dots,5$, $i=1,\dots,20$. Формируем фразу для правой части смыслового равенства.

Официальные названия департаментов обычно соответствуют концепции внутренней политики, мы даем лишь функциональные смыслы их направлениям работы.

В валидной переменной y^+_{1} (ее вес равен 37,96%, $\lambda_1=1.8978$) нами вложены в 2 компоненты 1-го собственного вектора 2 весомых значения: $\text{соп}(y_{1,z_5})=c_{51}=0,5$, $\text{соп}(y_{1,z_3})=c_{31}=0,5$. Смысл(y_{1,z_5})=«античестность», смысл(y_{1,z_3})=«порядочность».

Наличие валидной переменной y^+_{1} (из-за математического равенства $y^+_{ij} = z^+_{i1}c^+_{1j} + \dots + z^+_{i5}c^+_{5j}$, $j=1,\dots,5$, $i=1,\dots,20$) когнитивно моделирует смыслы z^+ -переменным z^+_3, z^+_5 . Смысл(y_{1,z_5})= «античестность», смысл (y_{1,z_3})=«порядочность» [2], а смысл z^+ -переменной z^+_6 зависит от значимых коэффициентов регрессии. Такими коэффициентами являются 2: $\beta_3=5, \beta_5=3$ (из 3-х значимых $\beta_1=4, \beta_3=5, \beta_5=3$. Всего их 5: ($\beta_1=4, \beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3$).

Для валидной переменной y^+_{1} зависимая z^+ -переменная z^+_6 имеет еще дополнительные смыслы, равные сумме 2-х смыслов $\text{Смысл}(z^+_{6;\beta_3=5,\beta_5=3}) = [0.426060505* \text{порядочность}] + [\text{Смысл}(y_{1,z_5}) = 0.276315603* \text{«античестность»}] = \text{античестная порядочность}$, отличающаяся, например, от демонстративной порядочности.

Для валидной переменной y^+_{2} (ее вес равен 34.59%, $\lambda_2=1,383727$) зависимая z^+ -переменная z^+_6 имеет смысл, равный сумме 5 смыслов. $\text{Смысл}(z^+_{6;\beta_1=4,\beta_2=1,\beta_3=5,\beta_4=2,\beta_5=3}) = 0.364208048* \text{Смысл}(z^+_{11}) + 0.092105201* \text{Смысл}(z^+_{22}) + 0.426060505* \text{Смысл}(z^+_{33}) + 0.184210402* \text{Смысл}(z^+_{44}) + 0.276315603* \text{Смысл}(z^+_{55}) = 4*[\text{«лицо низкой социальной активности»}] + 1*[\text{«низкая зарплата»}] + 5*[\text{«антипорядочность»}] + 2*[\text{«проявление деспотизма»}] + 3*[\text{«честность»}]$.

При этом нам легче опираться на значения экспертных значений коэффициентов регрессии $\beta_1=4, \beta_2=1, \beta_3=5, \beta_4=2, \beta_5=3$. Тогда $\text{Смысл}(z^+_{6;\beta_1=4,\beta_2=1,\beta_3=5,\beta_4=2,\beta_5=3}) = 4*[\text{«лицо низкой социальной активности»}] + 1*[\text{«низкая зарплата»}] + 5*[\text{«антипорядочность»}] + 2*[\text{«проявление деспотизма»}] + 3*[\text{«честность»}] = \text{нечестная рабская антипорядочность}$.

Для валидной переменной y^+_{3} (ее вес равен 34.157%, $\lambda_3=1,366273$) зависимая z^+ -переменная z^+_6 дополнительно имеет смысл, выражаемый фразой «батрак»: $\text{Смысл}(z^+_{6;\beta_1=4}) = 4*[\text{«лицо низкой социальной активности»}] = \text{батрак}$. Эта фраза выделяет то, что обладание которым индивиду присуще не своей воле. Смысл фразы «батрак» отличается от смысла слова «рабская», являющейся «генетической» характеристикой индивида. При этом используем математическую модель главных компонент [1]. Так как z^+ -переменная z^+_6 имеет когнитивный смысл: $\text{Смысл}(y_{3,z_6}) = \text{«стремится обмануть, а не добросовестно сделать что-либо»}$, то в рамках другой математической модели - ОМ МЛРА, применяемой в данной статье, смысл z^+ -переменной z^+_6 дополняется смыслом одной (из 5-ти) z^+ -переменной (из-за наличия математического равенства $z^+_6 = \beta_1 z^+_{11} + \beta_2 z^+_{22} + \dots + \beta_5 z^+_{55}$) передаваемой фразой «батрак».

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Смысл «стремится обмануть, а не добросовестно сделать что-либо» является скрытым, один из примеров недавно озвучен в СМИ Республики Казахстан: участились случаи фиктивных разводов в многодетных семьях, их скрытая цель – получение реальной денежной помощи, это случай обмана индивидом государства. На занятиях по дисциплине «Информационный бизнес» (тема «Приманка и крючок») студенты приводили мне примеры «обмана» для клиентов, побуждающие их к потреблению услуг в интересах бизнеса. Мы рассматриваем прежде всего обманы и другие моральные качества на ином индивидуальном уровне.

В валидной переменной y^4 (ее вес равен 25%, $\lambda_4=1.000$) нами вложены 4 индикатора присутствия знаний (в 4 компоненты 4-го собственного вектора - 4 весомых значений: $\text{corr}(y_4, z_2)=c_{24}=0.5$, $\text{corr}(y_4, z_3)=c_{34}=0.5$, $\text{corr}(y_4, z_4)=c_{44}=-0.5$, $\text{corr}(y_4, z_5)=c_{54}=-0.5$. Наличие

валидной переменной y_4 (из-за математического равенства $y^+_{ij}=z^+_{i1}c^+_{1j}+\dots+z^+_{i5}c^+_{5j}$, $j=1,\dots,5$, $i=1,\dots,20$) когнитивно моделирует смыслы z -переменным z_2, z_3, z_4, z_5 следующие смыслы: смысл $(y_4, z_2)=$ «низкая зарплата», смысл $(y_4, z_3)=$ антипорядочность, смысл $(y_4, z_4)=$ «проявление деспотизма», смысл $(y_4, z_5)=$ античестность. Тогда смысл z^+ -переменной z^+_6 зависит от смыслов значимых коэффициентов регрессии. Такими коэффициентами являются 2 коэффициента регрессии ($\beta_3=5, \beta_5=3$). Для валидной переменной y_4 зависимая z -переменная z^+_6 имеет смысл, равный линейной комбинации 2-х смыслов. Смысл($z^+_6, \beta_3=5, \beta_5=3$)= $5*[\text{антипорядочность}] + 3*[\text{честность}] + 2*[\text{проявление деспотизма}] =$ честная вынужденная антипорядочность= $\text{коррупция госслужащих}$.

Таблица 7. Значения имен, смыслов y - и z -переменных, коэффициентов (y, z) -корреляций

Весовая и смысловая характеристика валидных и модельных z -переменных в (β, C^+_{11}) -выборке ООМ МЛРА					
1	2	3	4	5	
«Вес» валидной переменной	Смысл валидной переменной	Обозначение валидной переменной	Значения «весов» z -переменной, линейно входящих в валидную переменную	Номера z -переменных x , линейно входящих в валидную переменную	Смыслы z -переменных, линейно входящих в валидную переменную
$\lambda_1=1,75$	«по правде (правильно) поступать»	y_1	$\text{corr}(y_1, z_5)=c_{51} = \mathbf{0,5191}$ $\text{corr}(y_1, z_3)=c_{31} = \mathbf{0,4481}$	3,5	смысл $(y_1, z_5)=$ «античестность» смысл $(y_1, z_3)=$ порядочность
$\lambda_2=1,383727$	«принудить к...»,	y_2	$\text{corr}(y_2, z_1)=c_{21} = \mathbf{-0,5}$ $\text{corr}(y_2, z_2)=c_{22} = \mathbf{-0,4}$ $\text{corr}(y_2, z_3)=c_{32} = 0,5$ $\text{corr}(y_2, z_4)=c_{42} = \mathbf{-0,5}$ $\text{corr}(y_2, z_5)=c_{52} = 0,5$	1,2,3, 4,5	смысл $(y_2, z_1)=$ «лицо низкой социальной активности», смысл $(y_2, z_2)=$ «низкая зарплата» смысл $(y_2, z_3)=$ порядочность смысл $(y_2, z_4)=$ «проявление деспотизма» смысл $(y_2, z_5)=$ «честность»
$\lambda_3=1,366273$	«обмануть, чтобы...»	y_3	$\text{Corr}(y_3, z_1)=c_{13} = \mathbf{-0,65}$	1	смысл $(y_3, z_1)=$ «лицо низкой социальной активности»
$\lambda_4=1$	«страху нагнать»	y_4	$\text{corr}(y_4, z_2)=c_{24} = \mathbf{0,5}$ $\text{corr}(y_4, z_3)=c_{34} = 0,5$ $\text{corr}(y_4, z_4)=c_{44} = \mathbf{-0,5}$ $\text{corr}(y_4, z_5)=c_{54} = \mathbf{-0,5}$	2,3, 4,5	смысл $(y_4, z_2)=$ «низкая зарплата» смысл $(y_4, z_3)=$ антипорядочность смысл $(y_4, z_4)=$ «проявление деспотизма» смысл $(y_4, z_5)=$ античестность

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Таблица 8. Значения субъективных весов и коэффициент регрессии

Номер j	Экспертно назначенный вес β_j	Формула Преобразования β_j в β_j^+	Коэффициент регрессии β_j^+
1	4	$\beta_1^+ = 0,368420804 = \beta_1 * \beta_2^+$	0,368420804
2	1	$\beta_2^+ = 0,092105201 = \beta_2 / \beta_2^+$	0,092105201
3	5	$\beta_3^+ = 0,460526005 = \beta_3 / \beta_2^+$	0,460526005
4	2	$\beta_4^+ = 0,184210402 = \beta_4 / \beta_2^+$	0,184210402
5	3	$\beta_5^+ = 0,276315603 = \beta_5 / \beta_2^+$	0,276315603

Валидной переменной y^+_5 (ее вес равен 0%, $\lambda_5=0.0000$) нами вложен индикатор присутствия знания: $c_{25}=0.5$, с использованием ОСЗ 2. Извлечем знание по ОМ МЛРА в 2,60% ($\beta^+_5=0.13012$).

Смысл($z^+_6, \beta_5=3$)= $3 * \text{смысл}(\beta^+_5) * \text{смысл}(y_5, z_5) = 3 * [\text{«честность»}] = \text{«честность»}$. Мы извлекли, применяя ОМ МЛРА, еще 2,60% знаний, внесенных применением ОСЗ2($c_{25}=0.5$). В итоге $100\% = 37,96\% + 21,07\% + 21,07\% + 17,29\% + 2,6\%$ знаний мы когнитивно извлекли с применением математической модели и решив когнитивную Смысловую Обратную Задачу СОЗ.

Заключение

Мы рассмотрели новые моральные характеристики индивида, когнитивные ограничения морального типа, породили новые смыслы характеристикам морального климата, направлениям работ муниципального органа по мониторингу моральной среды человеческих ресурсов. новые моральные характеристики индивида мы рекомендуем применять на практике.

Они не учитываются в нормативных документах, при планировании этапов в проектах по модернизации сознания общества и каждого казахстанца. Новые смыслы характеристик морального поведения индивида делает актуальным предлагаемое рассмотрение вопросов (при реализации Программы «Рухани жангыру»), в темах разделов поведенческой экономики.

Разработанная Когнитивная Модель Структуры Муниципального Органа по Мониторингу Моральной Среды для подвидов Человеческих Ресурсов основана на многих моделях () смотрите выше). Значимости и новизна моделей приведены в статье [1].

Мы рассмотрели некоторые нами измеряемые скрытые моральные качества (показатели), присущие, по нашему мнению, трудовым ресурсам стран СНГ. Индивиды, принадлежащие к группе человеческих ресурсов, используют такие «средства», что их смыслы аддитивно суммируются и когнитивно равны смыслу Смысл(z^+_6); «влияющие коэффициенты

регрессии») = «стремится обмануть, а не добросовестно сделать что-либо». Суммарные смыслы 5 влияющих коэффициентов регрессии равны следующим 5 «честная порядочность» (отличается от демонстративной порядочности), честная рабская антипорядочность, батрак, коррупция госслужащих (честная вынужденная антипорядочность), честность. Эти 5 смыслов когнитивно конструированы из подмножеств 12 индивидуальных моральных показателей индивидов из Таблицы 7. Мы не вычисляли значения функций ценностей, как в статье [20], а нашли когнитивные смыслы скрытых показателей. Вопросы количественной ценности найденных показателей требует отдельного рассмотрения. Нами получен один пример сформированной структуры муниципального органа по мониторингу моральной среды. Когнитивная модель структуры муниципальных органов по мониторингу моральной среды для видов человеческих ресурсов состоит из 4-х департаментов, из 12 отделов, соответствующих своему 12 валидному (и моральному) показателю.

С учетом смыслов z-переменных, имеющих 2 смысла, количество «узких» специалистов увеличится до 20. Для 12 или 20 специальностей существует 6 отделов, функционально обязанных с суммарными компетенциями той или иной части из вышеуказанных отделов. Отделы должны иметь 6 документов «Положение об отделе...», где прописаны обязанности «узких» специалистов отдела с названием, отражающее суммарный смысл. Каждый смысл порождает свое название отделу, с соответствующими сотрудникам функциональными обязанностями.

Мы привели разные обоснования для учреждения 4-х Департаментов по мониторингу моральной среды человеческих ресурсов, в состав которых целесообразно включить 12 «узких» специалистов, сгруппированных по профилям из 2,5,1,4 наименований. Веса Департаментов упорядочены в порядке их приоритетности: №1 (2 разных профиля, 37,96%), №2 (5 разных профилей, 34,59%), №3 (один профиль, 34,157%), №4 (4 разных профилей, 25%). Заметим, что мониторинг лиц, действующих по принципу

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«обмануть, чтобы...» настолько много - 34.157%, что вес Департамента №3 по их профилю сопоставима с Департаментом №2 (5 разных профилей, 34.59%). Доля обманщиков сопоставима с долей «принудителей всех мастей» - необходимо когнитивно смоделировать подвиды профиля для специалиста из Департамента №3.

Специалисты разных профилей должны быть объединены в 5 отделов-по числу экспертных значений коэффициентов регрессии. Число

специалистов одного профиля (из 12) должно быть кратно фактической нагрузке в отделе. Официальные названия департаментов, отделов обычно соответствуют концепции внутренней политики, мы даем лишь функциональные смыслы их направлениям работы. Вопросы нормирования труда каждого специалистов и вопросы разработки классификатора профессий рабочих и новых должностей служащих остаются вне рамок статьи.

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ETHNIC COMPOSITION OF THE MOUNTAIN DISTRICTS OF UZBEKISTAN IN THE EARLY XX CENTURY (IN THE CASE OF SANGZAR - ZAAMIN REGION)

Abstract: This article on the basis of scientific literature, archival sources and field materials were analyzed traditional ethno cultural processes and elaborated its internal and external mechanisms. It's showed reciprocity in result of mutual contacts of various economic-cultural types of population, its transformation under influence of political and social-economic factors, the formation under influence of political and social – economic factors, the formation of common regional ethnic composition Sangzar-Zaamin region and ethnic culture, the cultural unification as result of integration, consolidation and assimilation processes.

Key words: Sangzar - Zaamin region, ethno contact zone, ethno cultural processes, settled and half settled ethnic groups, economic-cultural types, ethnic and local peculiarities, integration, consolidation, assimilation.

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Introduction

Thanks to independence, the study of the ethnic history of the Uzbek people, including the ethno genesis, has become one of the pressing issues of our time. Even though researchers have done a great deal of work on this issue, there are still a number of issues related to this problem.

At the same time, the exhausted inhabitants of the Sangzar - Zaamin region are the common ethnics of the seeds and cemeteries of different historical epochs, while preserving their origins, customs and traditions, separated from one another. According to the results of researches, the population of the mountainous and foothill areas of Jizzakh region differs from the adjacent regions, with the location and diversity of ethnic groups. In particular, there were representatives of different nationalities, tribes, representatives of Bakhmal, Zaamin, Forish, Gallaaral and Forish districts. In the foothills of Molguzar and Turkestan ridges lived Uzbek, Kyrgyz and Tajik people.

Part 1. Before considering the ethnic composition of the population of Sangzar-Zaamin

region in the late 19th and early 20th centuries and its location, we consider it appropriate to briefly review the history of administrative territorial formation of the area following the occupation of Central Asia by the Russian Empire on June 12, 1886, the Samarkand Region was established in accordance with the Charter of the Turkestan land administration, which divided into four provinces: Samarkand (26 volosts before the revolution [1, p.3.] Kattakurgan (total of 17 volosts before the revolution), Khujand (total of 14 volosts before the revolution) and Djizak (up to 20 volosts in the rebellion the three districts, such as Bag'don, Yangikurgan and Zaamin) [2, p.1.].

In 1913, the area of the former provinces of Samarkand region was 23,523 km², of which 11,444 km² in Jizzakh, 5,521 km² in Kattakurgan and 6,556 km² in Samarkand [3, pp.2-4]. It should be noted that the system of governance in the provinces and provinces continued until the 1st quarter of 1927 [3, p.7]. After the zoning in 1927, the Samarkand region was renamed into the district, and 10 were named after Akdarya, Bulungur, Jizzakh, Zomin, Mitani, Poyariq, Lower Darg'om, Upper Darg'om, New Kazan aryk

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(later called Urgut [3, p.17]), Yangikurgan (later 1936 Gallaaral region) [4, p.1] and the region was divided into regions such as the Bulung'ur district in 1935) [3, p.17]..

The current Forish district, which is part of the research area, is formed in 1935 by some border villages of Poyariq, Jizzak, Gallaaral and Nurata districts. Also, Khavost and Yangiabad districts, which are part of the modern Syrdarya and Jizzakh regions, are part of the Mirzachul highway in the Tashkent region, and only after the zoning of the Havana was created as a separate district [3, pp.14,17].

The Sangzar - Zaamin region has relatively little knowledge of the ethnic history of the 20th century, with no extensive research on the ethnic composition and social life of the population in the region. Nevertheless, the information about the ethnic history of the Sangzar-Zaamin region was discovered in the works of Russian tourists in the early 20th century, in particular in military and ethnographic expeditions, as well as in the mid-20th century, in particular B.X.Karmisheva, K.Shoniyazov and others we can see in his research. In addition, field data from the oceanic populations also enriches our perceptions of the industry.

If we look at the statistics of the archives of 1903-1905, we can see that most of the peoples are ethnic Uzbek's, Kyrgyz's and Tajik's. In particular, the Kyrgyz population is estimated at 50 914 people, including 26 711 men, 24 203 women in Otakurgan, Chardor, Kyzyl-Kum, Fistalitau and Koktyubin belonging to the Bagdon district of Djizak region, Chashmaob volcano of Yangikurgan area (202 people including 149 males, 53), as well as in the center of the center of uezd Jizzakh (11 men including 7 men and 4 women). At the same time, there are no Kyrgyz in Zaamin [5, pp.266, 275, 280].

Part 2. Comparing the population data in Uzbekistan with other literature, we can see that there are certain differences. For example, in the Zaamin district, Kyrgyz also lived, but they were not mentioned in the population list data. It should be noted here that the data on population and farm surveys are almost incompatible with each other.

Tajiks mainly belong to the Bagdon District of Jizzakh Province, 10,000 of which are located in Bagdon, Sintob (6,284 men, 5012 females) Sangzar volcano, Yangikurgan (56 male, 68 female), Zaamin tribe (approximately 1 269 people, of which 702 men, 567 women) the statistical data of the archive of residence is remarkable [5, pp.266, 275, 280].

According to the archive statistical data, in the region of Zaamin in 1907, the Jizzakh region occupied the territory of the Koratash volost. The total number of Uzbeks was 16334 (8 888 males, 7446 men), and the Russian population was 26 people (12 males and 14 women) gives [6, p.20].

Zaamin plot the total population of Zaamin is 16,991 people (8,821 men, 8,170 women), 1 310 Tajiks (716 males, 594 women), 4 Iranian men (3 males, 1 female), 1 Greeks), 20 of the Russians (13 males, 7 females), 14 of whom are gay (6 males and 8 women). Djizak uezdi New Korgon On the Sangzar valley in 1907 the total number of Uzbeks was 14,386 persons (7,876 males, 6,510 women), Tajiks - 114 persons (men - 54, women - 60 people), Russians - 4 persons (men 2, women - 2 persons) received. [6, p.16]

More accurate statistics on the ethnic composition of the study area than in previous years were reflected in the Census of the United States in 1926. According to him Forish district center Garasha village has 285 farms, including 261 Uzbeks households, 24 families of Tajiks - 1,372 people. [6, p.14]

The total number of farms in Karakalpak village (total 12 villages) was 695, of which 692 were in the Uzbek populated area, only 2 in Kuduk village and 2 in the village of Tadzhih and 1 other nationalities (3,264 in total) . There are 11 villages in the village of Nakrut (central Bad Nook village) with a total of 440 households, all Uzbeks and no other nationality. [7, pp.112]

The statistics of the 21st Century of the Central State Archive of the Republic of Uzbekistan, at the end of the 19th century, provide valuable information on the location of the population, the number of farms and the population, the number of livestock and gardens, and the number of livestock in Jizzakh. These statistics show that in Jizzak in 1871, 157 villages, 7109 family farms and more than 22 725 people lived in Jizzakh, of which more than 70 persons and 91 people lived in Jizak and Russians. These statistics show that in Jizzak in 1871, 157 villages, 7109 family farms and more than 22 725 people lived in Jizzakh, of which more than 70 persons and 91 people lived in Jizak and Russians [8, p.35]. This information may not have been fully retrieved. Because at that time the population was not registered at all. The Russian military themselves are in the villages and gather information.

To create an ethnographic map of the Samarkand region on July 20, 1922, a 7-week ethnographic expedition to Samarkand, Katta-Korgon and Jizzakh (Sovnarkom) will be organized .The composition of the expedition consists of 4 people, about the ethnic composition of 47 volost population in the Samarkand region statistical data collected. [9, p.52]

The collected data show that the inhabitants of the Sangzar-Zaamin oasis in the beginning of the 20th century were composed of representatives of different sorts of tribes and ethnicities, whose ethnic composition is more complex. [9, pp.55, 56, 57]

Yuz (Juzs) are one of the largest tribes of the 92-year-old Uzbek nation and have been recognized in recent medieval times. The Sangzar-Zaamin region is

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one of the few Uzbek segments of the population, which occupy leading positions in the number and syllabi. The territory of the region, namely Sangzar-Zaamin, is dominated by the Chinese-face seeds in the Kurgan-Kozan settlement and the Sangzar valley, the Nebusa, the Same, the Sart-Juz, the Tongue, the Uighur, the Khoja, the Khoji-Chinese the location of such sites as archives. [10, pp.83, 86]

At the end of the XIX century at the beginning of the 20th century, the population of Sangzar-Zaamin was 58,895. In the sources of the face, "Gissar's face" is a part of the Gissar face and the Surkhan Valley, the second part of which is called "Urethpa faces" in the middle basin of the Zarafshan valley and its eastern part - to Panjkent Uratepam, Khujand, Bekabad, to the basin of the Syrdarya river basin. , spread in the steppes and eroded. [11, p.79]

There is no objection to the issue of the coherence of the "Gissar yuzi" and the "O'ratepam yuzi" of the Gate. Their semen content is compatible with each other. Also, their proximity to seeds can be found in this historical fact [20, p.93]. A.I.Maksheev's works have also been widely covered in the history of hundreds of genealogy [13, pp.239]. A. I. Ethnographic data collected by Maksheev divided the face into eight strands. These are - fragrance, Chinese face, sweetheart, drown, goat, nayman, lilac, five hundred, wet. These links are subdivided into 56 networks. The well-known ethnographer V.V. Radlov attempted to analyze the genus of hundreds of seeds around Jizzakh, Zomin and Uratema, in his work "Sredney Azii" in "Ob osedlyx tyurkskix plemenax". The author also acknowledges that his face is composed of eight large numbers of people. [14, pp.24]

At the same time, in contrast to AIMaksheev, 9 networks are identified. These are three-legged, Karakalpak pyodzhegey, four-stroke, han-hoo, indigenous, tigiric, cunning, Turkmen, Jalal-Abad.

The well-known expert X.Donierov's book, devoted to this issue, has also clarified the issues of the hundred's. In the beginning of the 20th century, the Juzids were spread mainly in the Uzbek volost of Jizzakh. The city of Bolgali is located in the Yangi-Korgon volost, the Karakalpak, the Karkar, the Kyrgyz, the Uzbeks, the Kashatai, the Khatcha-Mukur volost, the Salin, the Uzbek Dynasty and the Khatcha-Mukur wolves.

According to the researcher N.Norboev, as a result of the defeat of the Kazakhs in 1723, the Kazakhs in Syrdarya and Jizzakh provinces came to power.

At the beginning of the 20th century, people of the Greater South were also registered in the Sangzar-Zaamin region. The bigger herring is mainly found in the Sangzar valley, which is mainly divided into four subspecies: the wild, the dog, the mountainous and the lush [9, p.54].

Analysis of forty-archaeological materials shows that in the early 20th century, the forests of the Sangzar-Zaamin region were mainly located in the territory of the Uzbek and Sauryuk wolves, and in the Sauryuk valley, its ports such as Alma-Ata, Arisht, Ak-Tenga, Bay-Chu, Chajalak, -Korq, black-and-white, mulberry, shale, shibor, karacha, pike, quail, homogeneous, Ravot and Uzbek, Yangikurgan volosts are represented by cats, shrubs, lynxes (Sangzar volosti), cats, lynx, lynx, lynx, moltob, beggars, pheasants, loyal (Sangzar volosti). It can be seen that Salin, Kaurak ports (Ravot volosti), and Brahma (Sauryuk volosti) are located.

Saray - tribe residents live mainly in Samarkand, Kashkadarya, Jizzakh and Andijan provinces. There are the following tribes of Saray tribe: a chest of palace, a palace palace, a palace of gold, a palace palace, and a bare palace. The people of the palace also live in the volcanoes of the Tajik province of Kulob, Kizilshuv and Kaynaku rivers. [15, p.66]

According to the archive data, in the early 20th century, the Saray family in the region of Sangzar-Zaamin was largely divided into neo-Qurgon and Usmat volcanoes, which were divided into white-gray and squat. [9, p.54]

During the field surveys, it was found out that now representatives of this division reside in Bakhmal district and Sangzar river.

Kipchag - kipchaks are ancient folk and Chinese sources are referred to as quyshe, kipcha, kucha, kibishe. In the Persian-Arab sources, the Kipchaks are called Kipchaks. Kipchaks are now one of the largest tribes of Uzbeks and live in Poyariq, Ishtikhan, Kattakurgan, Narpay, Khatirchi, Pastdargom, Bulungur districts of Samarkand Province. The Kipchaks live in Fergana, Bukhara, Khorezm and in the Republic of Karakalpakstan. Kamson kipchaks are also found in Surkhandarya, Tashkent, Uretypa and Sangzar-Zaamin.

At the beginning of the 20th century, in the territory of the Jizzakh region, the Kipchak clans were scattered, and the Chinese-Chinese towns were mentioned in Uzbek volost.

Kang Shelia K. SH. Shoniyozov wrote that "the elderly inhabitants of Zaamin, Jizzakh, Gallaorol regions came from the Khorezm region 150-160 years ago, ie in the late 18th and early 19th centuries, and came to the Zarafshan and Jizak oasis".[16, pp.142]

The western branch of the Qangli clan, located in the valley of Jizzak region, is located in Yangi-Korgon volost, in the Ravot and Yangi-Kurgan volcanoes, in the Ravot Volzhsky district and in the New-Karakol volost of the district of Kang-dong.

Nayman - siblings can now be found in all regions of Uzbekistan. They live in Samarkand (Pastdargom, Narpay) in Kashkadarya, Surkhandarya, Jizzakh, Syrdarya, Ferghana valley, Khorezm and Karakalpakstan. The peoples of the Nayman clan live

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in Tajikistan, Kazakhstan, Bashkortostan, Altai, Nepal and Mongolia. [15, p.58]

The materials of the archive testify that the Yangiyurgan volcano of the Jizzakh oasis has five children and jungle slopes of the Nayman seed.

The Karapchi family resides in Sauryuk volost [9, p.54]. He has been coworkers and Turkmen gangsters.

The Karakalpak Sangzar - Sangzar - Zaamin region is a small number, mainly in Sauryuk mountainous area. Scientists say that the origin of the Karakalpak people is the descendants of the Peoples of Peoples. The population of Qoraqalpak Sangzar - Zaamin region is relatively small, with relatively small number of its location and number, and it is observed that the number of villagers is lower than that of other seniors.

Kungrad - Sangzar - one of the largest tribes living in the Zaamin oasis. They lived in the early 20th century in the volosts of Kabul, Polvonaryk, Chelak, Kattakurgan, Daliariq, Yorbashi, Junshahar, Minariq, Thursday, Yangikurgan. In addition, the brownlands also lived in extensive areas ranging from the Guzar, Termez and Bobotag hills. [9, p.54]

Changali - seeds are spread in the Sangzar valley, its pollinated, sealed, solinic, dinghy stations on Osmat volost, and shodmon-tochinsky station on Sangzar volost.

The Turkmen is located in the territory of the Nakrut and Sauryuk volosts and is located in the Nakrut Volost, the Bukharian city of Khiva, the ancient Turkman, the cypress, the cautious, the quilted, the black-and-white, the Sauryuk volcano. [9, pp.55-60]

The conditions include Bagdon of Bagdon district of Jizzakh Province, Bagdad, Sintob volosts (13,094 people, including 7,162 men, 5932 women), Yangikurgan volcano Yangikurgan (total 303 people including 202 male and 101 female), Yom (about 1,610 people, including 860 men and 750 women). [5, pp.266, 275, 280]

Uzbek-speaking farmers were registered only in the volosts of Chashmaob, Karakalpak, Shahob, Juyidevonin, Polvonaryk, Dahbet, Chelak,

Kattaqugan, Samarkand, Daliariq, Yorbashi, Naukin, Minariq, Thursday, Kalkurgan, Khodjarjar, Dotkul, Yangikurgan, Sergali, Miton volumes.

The Gypsies are located in the south of the city of Jizzakh, in the right bank of the Sangzar steppes, in a neighborhood on the northern slope of Mount Morguzar. According to our sources, during the field research, Jizak and its surrounding gypsies live in the form of a half-old and nomadic lifestyle. The Roma are also called local populations. The reason for this is that in the past, nomadic and semi-nomadic gypsies mostly sewed their own cups and sewed them on the arched collars so as to be comfortable in the water. In Tajik, ariq is called "juj". The word comes from the meaning of the word "lizard lizards".

The Iranians - as an ethnic group of the Central Asian region, live in a number of smaller settlements in various parts of Uzbekistan, particularly in the cities of Bukhara, Samarkand, Jizzakh, Navoi, Koson and their surrounding villages, Darvoz and Kulob districts of Tajikistan. According to the Census of 1926, about 15,000 people lived in Bukhara and Samarkand oases. [9, p.54]

According to O.Suhareva, the emergence of the Eronic groups in Central Asia came about as a result of the raids on the northeastern provinces of Iran [17, pp.154-159]. The captured Shias were sold as slaves in Khiva, Bukhara and Samarkand. The looting of northern and eastern borders of Iran, the capture of the population and the sale of slaves continued in the eighteenth to nineteenth centuries. [18, p.222]

It is worth mentioning that the Sangzar - Zaamin region has a large ethnic composition of ethnic Uzbeks and representatives of different nationalities, which has not lost its character over the whole XX century.

The division of the population into tribes and clans in the past and today did not matter, since all Uzbeks and Kirgiz's, Tajiks lived in close economic ties and good-neighborly relations. The above division was usually traced at major socially significant events at holidays, folk festivals, and at sports competitions.

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THE STYLISTIC POSSIBILITIES OF SYNONYMS IN THE EXAMPLE NOVELS OF MUROD MUHAMMAD DUST

Abstract: The article deals with synonyms and literary influence of the fiction. It is taken as one of the means influencing to the literary meaning, their meanings and methodical tasks are taken into consideration.

Key words: synonym, novel, linguopoetics, style, metaphor, language.

Language: English

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Introduction

One of the main issues of the study of the literary language is the artistic sensitivity, the discourse of speech, which plays an essential role in the formation of image. Because the language is not the main material of literary work, it develops in a qualitative way in the process of the development of literary language and has impact on its meaning.

As a result of these means, the diversification of literary speech is formed. The improvement and enrichment of diversification of speech depend on the development of literary language.

As the language of art works as an example of the art of speech, it is based on the diversity of speech tools, the different word meanings as well as on the basis of different nouns word meanings.

With the help of the artistic expression of the speech tools, artistic coherence of literary work becomes stronger and aesthetically sensitive.

For example, it is widely used the expression of *beauty* in Uzbek language and literature and the looking and thickness of eyebrows as well as the length of eyelashes. This process is expressed by black eye, deep-set eyes in particular to dark night.

Analysis of Subject Matters

In recent times, the word “*timqora*” is mainly used to express this notion. By this word, it can be highlighted the main concept of this idea, which

intensifies the emotional-sensitivity of speech. In the sentence “*Faqat timqora ko'zlaridan kuchli bir olovning tafti urib turadi*” the words such as “*timqora* and *olov*” illustrates the intense symbol of matter, also by comparing one object to another one to form sensitivity in the text. So, how synonyms differentiate in the literary work, the language of the work will be so attractive. Proper use of synonyms can help the author to illuminate the idea correctly and accurately and avoid of repetition.

Any kind of art work, first of all, is characterized with richness of synonyms. Because it is impossible to create any kind of literary work without using synonyms. However, stylistic literary work is not only related to the use of synonyms but also literary sensitivity which is derived from synonyms. There are texts that their complexity cannot be altered by another synonym. Although this is one of the common features of words, it is even evoked in the use of synonyms.

Thus, the meaning of beauty, expressed by the word “*timqora*” intensified by the use of word “*olov*” which eventually ensured the artistic peculiarity of the idea. It is also demonstrated that the artistic expression of the language of literary work is only possible by the use of literary means such as metaphors, emotions, animations or use of vocabulary in speech rather than portable meaning. It is vital for synonyms to match with speech tools that accomplish this important task

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in literary texts. Synonyms are important linguistic units that represent the individual characteristics of author in the use of the word. The role of synonyms in the process of literary speech is expressed with different levels of the meaning. Since, the expression of words in synonymic line can vary in different ways depending on the emotionality of the concept.

The abundance of synonyms used in the artistic work testifies to the richness of the vocabulary of the language. In addition to this, synonyms have different meanings but these words have one dominant concept.

Research Methodology

In the works of writer, Murod Muhammad Dust, it is possible to notice such kind of differences in using synonymous words.

Especially, in the word "lolazor" there are many cases when dialectic synonyms of literary words are used and when approaching the text point, it is seen that the usage of such kind of dialectical versions of synonyms can display critical sense of words. For example, *Aksincha. Go'yo bo'g'zingizda maxsus filtr borday, go'yo jo'nroq so'zlarni ushlab qoladi. Shaldiroqlari o'tib ketaveradi. Soddarog gapira olmaksiz*". In this sentence "jo'n and sodda" words are synonyms.

The word "jo'n" has colorfulness related to oral speech by the word "jo'nroq". It means the notion of "simple" in the speech of ordinary people, while the word "soddarog" explains general usage of the notion of "sodda".

Actually, the meaning of the these synonyms in the text which means the notion of "sodda" (simple) is not synonymous meaning, its poetic meaning.

The synonym of the word *simple* which is used in oral speech is used to describe the idea expressed in the text. "*Biz tug'ilgan zamonlar o'zgacha, odamlar ham o'zgacha, Iskandar zamonidagi soddaligu go'llik yo'q*". In the given texts, three words are used to explain the meaning of "sodda" (simple) and though it is not different from the point of view, it has current stylistic opportunities.

Writer, in his works, not only used existing synonyms in the language efficiently, but also has created textual synonyms of the word.

By using such individual synonyms writer did it by using transitory meaning which didn't change the overall meaning.

The word "semiz"(plump)means the amount of object over the normal quantity. For example, "*Ochiq iddao qilolmaydi, qo'rqadi, harna, semizgina hamyoning bor*" [2: 509]". By using the word "semiz" artistically, the author applied the meaning of much money by "semizgina" (*hamyon*) and preserved the features on his individual style.

In this case, synonyms have a unique meaning in the process of expression, and that creativity can provide a diversity of language through effective use of it. One of the important features of the synonyms is

the appropriate image appropriate and precise words are among these linguistic units.

Using synonym words that are appropriate for the purpose the brightness of the image, the spirit of the heroes, a person's attitude toward others, the volume of speech, and so on bright reflections of his enthusiasm.

For example, in the novel "Lolazor," a sentence "Бунда изҳори дил ёки тазарру услуби қўл келмоғи қийинроқ" is from Saidqul speech. That is why this phrase has a good mood and kindness. The end is as follows: . "Рости шуки ланж сўзларни шу жойда тугатиб, бу ёғига бир-иккита чоғроқ манзаралар чизсак-да, асосий мақсад ва воқеаларга ёвуқроқ борсак..."[2: 514]. While the words "ланж сўзлар, чоғроқ манзаралар, чизмоқ" is the basis for a clear idea of what is meant to be expressed, , the use of the word "аниқроқ" instead of "ёвуқроқ" increased the enthusiasm of speech . Synonyms are a richness of speech, characterized by expressing one notion in different levels Because the concept of expression, which is expressed by synonyms, is in contrast to the basis of the artistic meaning. For example, this sentence "Яхшибоевнинг гапини рад этолмадим. Қолаверса, ёмон бир қусурим бор, боғимни кўрсатиб мақтангим келади", the word "қусур"(defect) has a common meaning with the words "айб, камчилик(sin, flaw)". The meaning of the action against the rule of law is expressed by the word айб (sin). The word камчилик (flaw) indicates a low level of compliance with the established principles.

It is clearly seen that both words have negative meaning. So the writer uses a word "qusur"(defect) that expresses much more positive attitude toward the words above to the habit of not being guilty (praise his garden). Because each synonym, while expressing the word, also contains the stylistic diversification. The presence of sensitive meanings in synonyms is one of the most important factors in forming the artistic meaning. The artistic meaning expressed through the synonym of the "qusur"(defect) indicates that the speaker is innocent and shows that he has a particular habit.

Synonyms, as well as the meaning of the text, serve as a methodical tool in the text. For example, in the sentence "E, parvo qilmang, degan qabilda so'z qotdi, men o'zim ham asalu bol emasman, yumshoq supurgi bo'lishdan xudo asrasin." [2:516] the word "gapirdi"(spoke) has different meaning with the word "so'z qotdi"(said) in terms of its literal diversification, and gave artistic spirit to the text, while the synonyms "asal, bol"(honey) in the same place, strengthened the intellectual conception.

Synonyms are linguistic tools that are used frequently in speech, and are used in many different ways. Especially, in literary texts, it can be observed that non-literary synonyms of one or another word

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have been met and carried out different methodical meanings.

Men tahdid qiladi, deb cho'chib tursam bular menga do'stlik ilkini cho'zmoqda ekan. Xursand bo'ldim. O'zimdanda nosir chiqarishga gumonim mo'l edi...[2:513]. In this sentence, the synonyms *do'q-tahdid(threat)*, *qo'l-ilki(hand)*, *yo'zuvchi-nosir(writer)* are used by author. The use of these words, combined with the specifics of the speaker, also contributed to the harmony of the literary text.

One of the most important features of synonyms is the specificity of one of the words in the synonymic row. The observation of the texts of the composer Mohammad Dust shows that these works have often been used in synonyms 'oral speech' and have been used to provide individuality and personality speeches.

-Maynang but, -deb maqtadi. Yaxshiboev.-hali sen zo'r olim-polim bo'p ketasanov (2: 518). This is a typical expression of the simple speaking speech. It's just the story of an uneducated young man from the village. therefore, the writer used the synonym "*but*" (*whole*) instead of the word "*butun*", and for describing uneducated village teenager he used the synonym "*maynang*" instead of the word "*aql*" (*knowledge*) as well as provide the simplicity of the text.

Analysis and results

In his works the author, the word is applied on the basis of the specific features of the text. The main purpose of the literary text is to be sensitive, since there are many ways in which the linguistic identity of the artistic style is arranged. Within the synonyms, they vary according to their literary diversifications and grades. therefore, in his works, the writer used *bayon etmoq (to make statements)*, *izhor etmoq (to give explanations)*, *aytmoq (tell)*, *yorqin, (aniq-clear)*, *muassal (to'la-whole)* *ado etmoq (bajarmoq-do)*, *baxsh etmoq (ba'gishlamoq - dedicate)*, *barkamol (yetuk-perfect)*, *munavvar, charog'on, porloq (yorug'-bright)* and these synonyms enhance literary diversification. This situation appears clear while using the words in a synonymic row in a particular text.

Yaxshiboyev zo'r ishtaha bilan yedi. Oshno odatdagidek chimxo'rlik qildi. Quvonchga to'yib

qolgan ekanmi, ikki-uch chimdigan bo'ldi-yu so'ng chetlanib, do'stining tamaddi qilishiga zavq bilan qarab o'tirdi. Yaxshiboyev ovqatni paqqos tushirib, tagidagi yog'ini ham barmoqlari bilan sidirib, non surtib tozalab bo'ldi-da sekin do'stiga gap qotdi. In this statement the synonyms like *yedi (ate)*, *chimdigan bo'ldi (to pinch)*, *tamaddi qilib (to have a snack)*, *paqqos tushirmoq (to eat completely)* and *tozalab bo'lmoq (to cleanse)* are used to describe the concept of "*yemoq(to eat)*". As a result of using these synonym words, first of all, the same word repetition that boring to duplicate, was prevented in the text. Also, every word took on peculiar meaning and stylistic diversification.

For example, the word *chimdimoq(to pinch)* is used to describe the concept of "*yemoq(to eat)*" as being lower than the norm and expresses a positive attitude by the word *tamaddi qilish (to have a snack)* while *paqqos tushirmoq (to eat completely)* means *ovqatni qoldirmay yemoq (to eat until the end)*.

The word *tozalab bo'lmoq (to cleanse)* is also used as a synonym for this word. In this case, there is a concept of *ovqatni batamom yemoq (to eat completely)* which is specific only to this text. In other texts, the word *tozalab bo'lmoq (to cleanse)* may not be synonymous with such words.

Therefore, this word is synonymous with a synonymic textual meaning. It should be noted that there are a lot of tools to organize the figurative and artistic of literary texts. As you know, the possibilities of the language of the artistic literature are infinite. It can be used widely in the use of words that are common to all speech styles in the process of creating artistic images, as the words used for all appearance of commonly spoken lexical layers have been used effectively.

In artistic literature, as it is widely used in word and portable meanings, it can be observed common language of literary works that the synonyms are used in the use of word variants, the use of different word forms and phrases.

There is no form of language that is widely used in folklore and sayings, as widely used in artistic literary language, and the free use of language tools is one of the most important features of artistic literary language.

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SYSTEM OF MODELING AND MANAGEMENT OF MULTI-STAGE PRODUCTION PROCESSES

Abstract: The paper presents the main subsystems of the system for modeling and control of multistage production processes. As a result of the functioning of the system modeled by an ordered sequence of machines, describing a multistage spatially distributed system as a collection of interconnected objects (processing steps, components, operations).

Key words: main subsystems, modeling and control, describing a multistage spatially distributed system as a collection of interconnected objects.

Language: Russian

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Classifiers: Innovative technologies in science.

СИСТЕМА МОДЕЛИРОВАНИЯ И УПРАВЛЕНИЯ МНОГОСТАДИЙНЫМИ ПРОИЗВОДСТВЕННЫМИ ПРОЦЕССАМИ

Аннотация: В работе представлены основные подсистемы системы моделирования и управления многостадийными производственными процессами. В результате функционирования системы моделируется упорядоченная последовательность автоматов, описывающих многостадийную пространственно-распределённую систему как совокупность взаимосвязанных объектов (стадий обработки, агрегатов, операций).

Ключевые слова: основные подсистемы, моделирование и управление, описывающие многоступенчатую пространственно распределённую систему как совокупность взаимосвязанных объектов.

Введение

Методология анализа, моделирования и оптимизации многостадийных производственных процессов должна обеспечить решение задачи выбора оптимальных технологических режимов, получения максимально приближающейся к заданному качеству продукции путем изменения технологических условий обработки полупродукта на последующих стадиях на основе информации о предшествующей технологии. Она

призвана предоставить более полную информацию о реальных затратах по всему сортаменту [1,2,3,4].

Использование структурного подхода к моделированию технологического процесса позволяет разбить технологический процесс на технологические этапы с необходимой степенью детализации. Каждый из технологических этапов можно представить в виде клеток, описанных в виде входов, состояний и выходов

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(технологические факторы на предыдущих этапах, технологические факторы на текущем этапе и свойства готовой продукции). Тогда модель технологического процесса можно

представить в виде итеративной цепи. Пример модели технологического процесса в виде итеративной цепи представлен на рисунке 1.

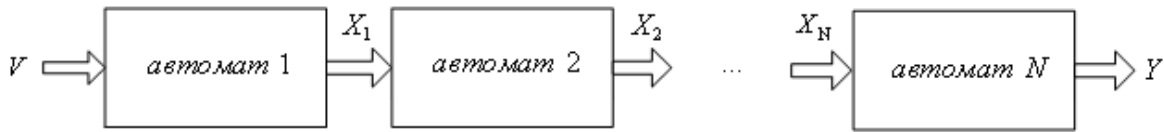


Рисунок 1. Модель технологического процесса в виде итеративной цепи

Для решения поставленных задач разработана система моделирования и управления многостадийными производственными процессами, которая состоит из комплекса подсистем:

- подсистема взаимодействия с пользователем;
- подсистема загрузки данных;
- моделирования структуры технологии;

- подсистема построения вероятностных и управляющих автоматов;
- подсистема выбора оптимальной технологии;
- подсистема коррекции технологии;
- подсистема хранения данных.

Схема функциональной структуры приведена на рисунке 2.

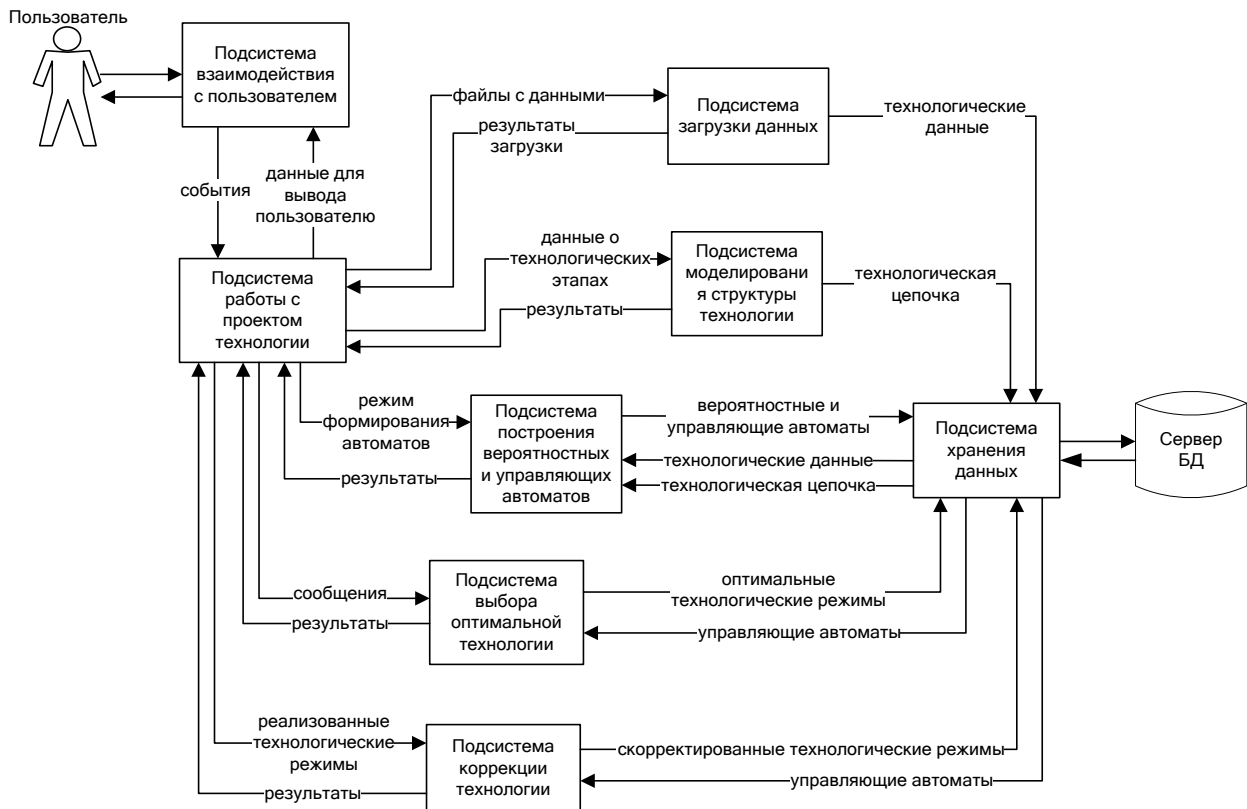


Рисунок 2. Общая функциональная структура системы моделирования и управления многостадийными производственными процессами

Целью функционирования автоматизированной системы является определение оптимальных технологических

режимов для технологии и коррекция технологии при нарушениях оптимальных режимов[5,6,9].

Подсистема взаимодействия с пользователем предоставляет пользователю удобный интерфейс

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для управления системой и вывода результатов в удобном виде (графики, таблицы).

Подсистема работы с проектом технологии предназначена для создания и открытия проекта технологии, а также, для создания моделей технологии и добавления технологических данных в рамках проекта.

Подсистема загрузки данных предназначена для загрузки технологических данных и категорий качества в систему.

Подсистема моделирования структуры технологии позволяет создавать и проектировать цепочки технологических этапов.

Функции подсистемы:

1) создание и проектирование цепочки технологических этапов;

2) распределение технологических факторов по этапам.

Результатом работы данной подсистемы является описание структуры технологического процесса, включающей цепочку технологических этапов и списки технологических факторов по этапам.

Подсистема построения вероятностных и управляющих автоматов позволяет создавать модели технологии в виде вероятностных автоматов, а также строить управляющие автоматы для технологии.

Функции подсистемы:

1) формирование алфавитов технологических факторов и показателей качества;

2) построение вероятностных автоматов, описывающих технологию;

3) анализ работы вероятностного автомата с помощью критерия связи технологии и показателей качества;

4) построение управляющих автоматов для технологии;

Описывается режим формирования алфавитов факторов и показателей качества, структура цепочки технологических агрегатов. Выходная информация представляется в виде вероятностных автоматов, анализирующих технологию и формирования управляющих автоматов. [1,7,10]

Подсистема выбора оптимальной технологии предназначена для выбора оптимальных технологических режимов (обеспечивающих наибольшую вероятность достижения заданного качества продукции).

Подсистема коррекции локальной технологии предназначена для управления технологическими режимами на последующих технологических этапах при нарушениях оптимальных режимов.

Подсистема хранения данных предназначена загрузки, хранения и обработки и получения данных.

В итоге моделируется упорядоченная последовательность автоматов, описывающих многостадийную пространственно-распределённую систему как совокупность взаимосвязанных объектов (стадий обработки, агрегатов, операций).

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COMPONENTS OF THE SYSTEM OF THE END-TO-END INTERNAL CONTROL OF SCIENTIFIC ENTERPRISES WITH STATE PARTICIPATION

Abstract: This article discusses the possibility of using the «three lines of defense» model as one of the components of a system of end-to-end internal control of economic entities. The paper provides a schematic illustration of an integrated risk management and internal control system, and also focuses on monitoring controls. In addition, the article discusses the internal audit function as an element of the end-to-end control system, as well as an illustration of the elements of the control environment.

Key words: three lines of defense; internal control; end-to-end internal control; Management of risks; internal audit; control environment.

Language: Russian

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Classifiers: Management of risks.

КОМПОНЕНТЫ СИСТЕМЫ СКВОЗНОГО ВНУТРЕННЕГО КОНТРОЛЯ НАУЧНЫХ ПРЕДПРИЯТИЙ С ГОСУДАРСТВЕННЫМ УЧАСТИЕМ

Аннотация: В данной статье рассматривается возможность применения модели «трех линий защиты» в качестве одного из составных компонентов системы сквозного внутреннего контроля экономических субъектов. В работе приводится схематичная иллюстрация интегрированной системы управления рисками и внутреннего контроля, а также уделяется внимание мониторингу средств контроля. Кроме того, в статье рассматривается функция внутреннего аудита как элемента системы сквозного контроля, а также приводится иллюстрация элементов контрольной среды.

Ключевые слова: три линии защиты; внутренний контроль; сквозной внутренний контроль; управление рисками; внутренний аудит; контрольная среда.

Введение

Рассматривая вопрос о необходимости создания и внедрения системы сквозного внутреннего контроля в практику организаций, осуществляющих научно-исследовательские разработки и работающие в данной сфере по государственным заказам, необходимо акцентировать внимание на целесообразности построения такой модели контроля, методологический базис которой будет включать

в себя следующие компоненты, выделяемые как в научных, так и в нормативно-прикладных источниках: наличие контрольной среды; системы управления рисками в учреждении; специальных действий по осуществлению контрольной функции – разработка и внедрение, а также мониторинг средств контроля.

Важность изучения вопросов, связанных с модернизацией системы финансового контроля неоднократно подчеркивалась в научной

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литературе [9]. Также стоит добавить, что информационная система, качество работы которой влияет на своевременность, достоверность и полноту получения информации для целей контрольной деятельности, включающая в себя как каналы коммуникации, так и компоненты в виде бухгалтерского, управленческого и иного учета, должна функционировать с использованием современных информационных и компьютерных систем и вычислительных мощностей, с использованием автоматизированного программного обеспечения. Особое значение это имеет в контексте обеспечения инновационной активности предприятий [12-14].

Под «контрольной средой» в данном случае необходимо понимать наличие у руководства и сотрудников учреждения представления о необходимости осуществления контрольной функции, ее сущности, текущем состоянии в учреждении, а также действий, направленных на создание и модернизацию системы внутреннего контроля, основанного на понимании важности и необходимости системы внутреннего контроля.

На основании наиболее часто встречающихся компонентов контрольной среды, выделяемых в нормативных актах риск-ориентированных моделей контроля (таких как

COSO), а также стандартах аудиторской деятельности, лучших практиках и т.д., нами была составлена схема контрольной среды, присущей для рассматриваемых в разрезе темы выпускной квалификационной работы учреждений, представленная на рисунке 1.

При организации системы сквозного внутреннего контроля, одним из элементов системы должна выступать модель «трех линий защиты», внедряемая в крупных международных производственных и научных транснациональных компаниях, на основе принципов, описанных в 41-й статье 8-ой директивы ЕС, бюллетени Института Внутренних Аудиторов «Три линии защиты в среде эффективной оценки риска и контроля» и описания модели «трех линий защиты» концепции COSO.

Модель трех линий защиты является компонентом интегрированной системы управления рисками и внутреннего контроля, а равно элементом системы сквозного внутреннего контроля, в силу обеспечения контрольной функции на разных этапах деятельности хозяйствующего субъекта, разными подразделениями и ответственными лицами, а также с использованием различных методов контроля и управления рисками [1]. Данная модель представлена на рисунке 2 далее.



Рисунок 1 - Элементы контрольной среды

В случае внедрения данной модели в практику организации, осуществляющей научно-исследовательские работы с использованием бюджетных средств, 1-ая линия защиты должна выстраиваться на уровне бизнес-процессов и структурных подразделений хозяйствующего субъекта. На этом этапе происходит разработка дизайна и обеспечение функционирования контрольных процедур. На данном этапе происходит обеспечение эффективной работы системы управления рисками, что включает анализ и оценку, управление и контроль за

рисками, разработку процедур контроля и обеспечение эффективной работы системы внутреннего контроля, а также модернизацию контролей по выявленным недостаткам их функционирования (что позволяет выявить другой элемент системы сквозного контроля – модель FMEA-анализа (здесь и далее – Failure Mode & Effects Analysis)). Данный этап, помимо выполнения контрольных процедур, предполагает разработку и внедрение в практику хозяйствующего субъекта формализованных

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процедур и политик, которые регламентируют действующие и новые бизнес-процессы [2, 3].

Первая линия защиты объединяет руководителей бизнес-подразделений, ответственных за выявление рисков и

непосредственное управление ими (разработка, внедрение и обеспечение функционирования контрольных процедур). На данном этапе управление рисками рассматривается в качестве важнейшей задачи.



Рисунок 2 - Интегрированная система управления рисками и внутреннего контроля. Модель «три линии защиты»

Вторая линия защиты предполагает обеспечение со стороны руководства хозяйствующего субъекта и руководителей проектов функции непрерывного мониторинга, обеспечения внедрения системы управления рисками, внутреннего контроля, комплаенс функции (соблюдения законодательства и внутренних нормативных актов), расследование фактов мошенничества и т.д. На данном этапе происходит мониторинг внедрения и осуществления контрольных процедур, методов оценки рисков, комплаенса и т.д. Также осуществляется мониторинг процесса разработки политик и процедур, затрагивающих аспекты управления рисками и внутреннего контроля.

Вторая линия включает подразделения, ответственные за внутренний контроль, управление рисками, комплаенс, юридическое сопровождение и т. п. На данном этапе обеспечивается непрерывный мониторинг процесса разработки и функционирования контрольных процедур, относящихся к первой линии защиты.

Следует отметить, что мониторинг средств контроля, как действие по осуществлению контроля и компонент системы сквозного внутреннего контроля, является важной составляющей системы контроля в хозяйствующих субъектах с государственным участием, а также учреждениях, работающих с

государственными заказами в научной сфере. Мониторинг средств контроля должен осуществляться руководством хозяйствующего субъекта для поддержания системы внутреннего контроля в режиме постоянной работы.

Наконец, третья линия защиты отвечает за независимый контроль деятельности по управлению рисками. Она представлена подразделением внутреннего аудита, внешними аудиторами и регуляторами, сфера ответственности которых имеет отношение к стоящим перед организациями задачам в области управления рисками.

Процесс мониторинга средств контроля, в рамках модели трех линий защиты и компонентов системы сквозного внутреннего контроля, должен регламентироваться политикой о внутреннем контроле, также как и общие требования к средствам контроля.

К таковым относятся: своевременный и полный учет всех операций, осуществляемых с использованием бюджетных средств и иных ресурсов, направленных на реализацию государственного заказа, с целью обеспечения учетной функции достоверной информацией для подготовки финансовой отчетности согласно установленным срокам и порядкам; осуществление всех финансовых операций с бюджетными средствами, в рамках проекта, по установленному порядку одобрения и

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визирования операций уполномоченными лицами; проведение инвентаризации активов имеющихся в наличии и учтенных на балансе хозяйствующего субъекта, а также принятие оперативных мер в случае существенных расхождений; обеспечение доступа к активам и бюджетным средствам (финансирование проекта) только по одобрению вышестоящих уполномоченных лиц, согласно установленной форме подачи заявок, их визирования и ввода в систему учета документации.

Основные направления, по отношению к которым можно выделить средства сквозного внутреннего контроля, представлены на рисунке 3 далее.

Контрольные действия должны быть сгруппированы по таким категориям процедур и методов осуществления внутреннего контроля как: обработка информации (применение общих средств контроля информационных систем, включающие в себя средства контроля в отношении защиты научной и иной информации и электронной документации от несанкционированного доступа, приобретения лицензионного специального программного обеспечения для нужд проекта, приобретение прикладного программного обеспечения для обеспечения работы информационной системы и др.; применение прикладных средств контроля, таких как автоматизированное тестирование вводимых числовых данных, контроль сквозной нумерации проектной документации, проверка счетов финансирования проекта и др.), проверка выполнения этапов проекта (проверка результатов деятельности согласно плану проекта, сопоставление затраченных ресурсов с объемами выполненных работ, анализ фактических показателей выполнения проекта в сопоставлении с плановыми), проверка состояния объектов контроля (ограничение доступа к активам и бюджетным средствам проекта, ограничение

доступа к проектной документации и сопутствующей информации, санкционирование доступа к электронным носителям информации, файлам с данными, специальному программному обеспечению, проведение инвентаризаций активов), разделение обязанностей (распределение между сотрудниками полномочий санкционирования различных операций, при которых достигается перекрестный контроль в процессе санкционирования, разграничение полномочий по регистрации финансовых операций в системе учета и т.д.) [5,6,7].

В рамках системы сквозного контроля, как отмечалось ранее, должна присутствовать контрольная функция как со стороны государственного заказчика, так и со стороны внешних контролирующих органов, вовлеченных в процесс контроля за реализацией проектов по государственным контрактам. Так, должен быть обеспечен предварительный контроль на этапе принятия проектного решения и дальнейшего обоснования финансирования. Контроль за принятием проектного решения может осуществляться с использованием модели FMEA-анализа, независимых экспертных заключений и запроса от исполнителя предпроектного предложения с содержанием предполагаемых основных этапов работ, сроков финансирования, обоснования целесообразности и предполагаемых результатах. Безусловно, говоря о проектных работах в сфере научно-исследовательских работ, порой трудно заранее спрогнозировать результат и возможности его дальнейшего применения, однако получение такой информации, ее проверка и сверка с альтернативными источниками, позволит уменьшить неопределенность и асимметрию информации, а значит, принять более верное решение и более качественно проконтролировать его принятие и реализацию на предварительном этапе.

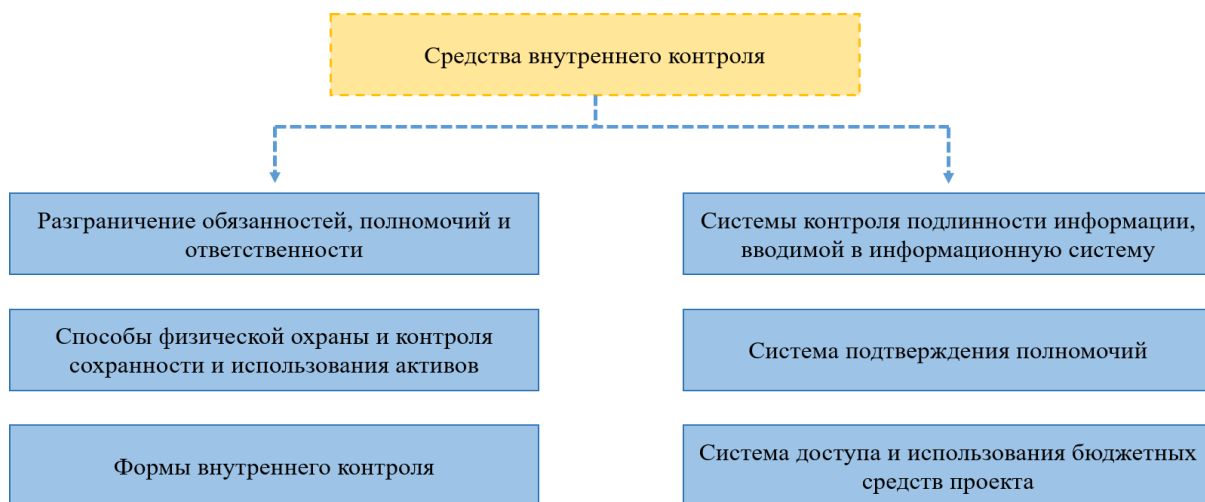


Рисунок 3 - Идентификация средств внутреннего контроля

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В случае с обоснованием финансирования, заказчик обязан проверять представляемые исполнителем планы-графики финансирования, его планируемое распределение по предполагаемым затратам, для определения экономической эффективности проекта, а также препятствования завышению предполагаемых изначально издержек и стоимости проекта. Осуществлять контроль такого рода заказчик обязан с использованием инструментов «бенчмаркинга» - проведения анализа рынка, если это возможно, а также путем привлечения независимых экспертов, работа которых должна обеспечивать дополнительное понимание у заказчика целесообразности проекта, предполагаемых методов и путей его реализации, а также требуемого финансирования и возможных рисков, связанных с необходимостью его увеличения. В части контроля за обоснованием финансирования, отдельное внимание следует уделять обоснованию начальной (максимальной) цены контракта, так как именно здесь зачастую происходят манипуляции со стороны исполнителя.

Выступая в качестве элемента системы сквозного внутреннего контроля за использованием бюджетных средств, выделяемых на реализацию научно-исследовательских работ по государственным контрактам, внутренний контроль со стороны организации-заказчика должен уделять особое внимание предварительному контролю на этапах подготовки и проведения тендера и последующего контроля за результатами реализации проекта.

Кроме того, в рамках последующего контроля, заказчик должен уделять внимание проверке гарантийных обязательств исполнителя, а также их реализации в случаях, установленных в рамках их исполнения по контракту. Контроль за привлечением исполнителя к реализации гарантийных обязательств позволит сохранить бюджетные средства, выделяемые на доработки и исправление недостатков результатов труда.

Также важным компонентом системы сквозного внутреннего контроля, по нашему мнению, должен выступать внутренний аудит, в силу того, что служба внутреннего аудита, выполняя одну из своих основных функций –

оценку эффективности контрольных процедур в организации, является как бы самостоятельным и независимым контрольным органом, который «контролирует контроль», позволяя с помощью внутренней службы, функционирующей независимо от внутреннего контроля и будучи подчинена собственникам, в том числе государству и его представителям в высшем управленческом составе, выявлять недостатки в существующих контролях, выступая в качестве последующего контроля [5].

Внутренний аудит также осуществляет оценку эффективности бизнес-процессов, прежде всего, связанных с выполнением проектной работы, позволяя также в режиме последующего контроля выявлять недостатки в текущих процессах и предлагать методы их устранения. Внутренний аудит в системе сквозного внутреннего контроля, будет выступать как бы надстроечным элементом всей системы внутреннего контроля, но не последним звеном всей контрольной функции.

Последним элементом общей системы контроля за бюджетными средствами, выделенными на реализацию научно-исследовательских работ по государственным контрактам, выступают внешние по отношению к организации-исполнителю государственные контрольные органы. Конечно, определять их как элементы системы внутреннего контроля организации неверно, однако в рамках модели сквозного внутреннего контроля, их деятельность выступает одним из элементов общей совокупности контролей, имея сквозной характер вертикальной контрольной функции по отношению к объектам контроля.

Рассмотренная модель «трех линий защиты» может быть эффективно интегрирована в общую систему сквозного внутреннего контроля как крупных коммерческих предприятий, так и экономических субъектов с государственным участием, в силу того, что модель сочетает в себе управление рисками и осуществление контрольных функций на различных уровнях деятельности экономического субъекта, в разных бизнес-процессах и разными субъектами контроля, что и обуславливает сквозной характер данной модели.

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MECHANISMS FOR IMPLEMENTING CORPORATE GOVERNANCE IN INDUSTRY DEVELOPMENT IN UZBEKISTAN

Abstract: *In this paper work it is studied corporate governance system in case of industry section of Uzbekistan. In the period of transition and diversification of the national economy and after the new economic development reforms converting in clustering methods Uzbekistan considered one of the most effective implementation of the corporate policies. Labor division and specialization of the regions could have been innovated into modern development goals of export oriented policy of the government. Stockholders by local and international investors contribute their efforts by capital inflow and outflow within the country and outside the country. Particular attention was paid to the development of agricultural machinery sector, manufacturing process and service sector oriented new approaches have developed by firms and companies. In addition, few economic models are distributed under regional statistic data. Conclusion is represented with the international cooperation for effective economic growth.*

Key words: corporate governance, industry, development, economic model, joint-stock companies.

Language: English

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Classifiers: economic.

Introduction

From the years of independence, the development of the industry and its extensive network have radically changed. New industries have been found in the industry and their share in the GDP of the country has increased. Oil and gas, electronics, automotive, textile, raw materials processing and new agricultural machinery have become the priority industries. High-tech and value-added products are produced in these sectors. Such changes in the industry have led to rapid growth in the country. Corporate governance is a unique process not only in industrial production, but also in other sectors of the economy. From this point of view, the use of industry-wide corporate governance is a good way to do so. There is practically no experience of corporate governance in the industry of Uzbekistan. Therefore, it is important to study the mechanism of its

introduction into the industry and increase the efficiency of corporate production.

Methods

In this article authors used secondary source data analysis of quantitative methods with various source of data collection. And some statistical analysis of the government body.

Literature review

The notion of "corporate governance" is extensive, and many scientists have expressed it. For example, I. Khraborova argues that corporate governance, the management of organizational-legal regulation of this business, is an inter-agency internal structure of the company [1].

Karnaukov describes corporate governance as managing a certain set of synergies. S.A.Massyuktin describes corporate governance as a combination of

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relationships between managers and owners of the enterprise to ensure the efficiency of the enterprise and protect the interests of owners and other participants [2]. Corporate Governance Concept, as expressed in S. Kukura's Conceptual Framework, includes the field of practical and scientific knowledge and the practice of organizing and coordinating large-scale enterprise enterprises [3].

Other point to the concept of corporate governance as part of the corporate governance curriculum. Corporate Governance identifies a set of rules and culture that governs and controls a corporation that strives for the benefit of its stakeholders, such as people, customers and suppliers, in close proximity settlements [4].

According to Sh.Zaynutdinov and D.Rahimova, the economist from Uzbekistan, "Corporate Governance is a joint effort of interested parties to make profit [5].

Prof. M. Hamidulin explained the concept of "corporate governance" - it is the ownership of corporations, the strategic environment for more effective use of the product and the fair distribution of incomes derived from all of the corporate relationships, [6] definition "The corporate governance is a type of activity carried out to achieve business goals based on certain principles of governance, based on existing legal norms, irrespective of the form of ownership ..." is described [7].

Speaking about corporate governance, Professor B. Berkinov concluded that corporate governance is a system that is, first of all, a complex, rapidly changing mechanism that is interconnected by many interconnected entities, documents and a set of internal normative documents that constitute an

internal mechanism for controlling the corporation by proprietors, managers and lenders [8].

N. Rasulov explains the concept of corporate governance as follows: "It is a system that operates on the basis of goals, objectives and relationships inherent in corporate governance laws, mechanisms and principles."

Based on the above concepts of corporate governance, the author posed the following problem. Corporate governance is a day-to-day management system designed to increase profitability and efficiency of enterprises.

Results

The key objective of introducing a corporate governance-based management mechanism in industry is to ensure that businesses benefit from a high level of enterprise balance.

In order to introduce corporate governance in industrial enterprises, it is necessary to increase the responsibility of chairmen of the executive body, supervisory board and auditing committee members. In implementing corporate governance in industrial enterprises, priority should be given to legal-normative documents, regulations, guidelines and most importantly the Corporate Code.

All the existing industrial enterprises in Uzbekistan are joint-stock companies. Therefore, in the implementation of corporate governance all actions must be linked to the activities of the shareholders. In today's conditions, the protection of shareholders' rights is one of the main objectives of the company's development. Currently 603 joint-stock companies operate in the country, of which are the joint-stock companies in the industry. The development of joint-stock companies in the industry is given in the following Figure 1.

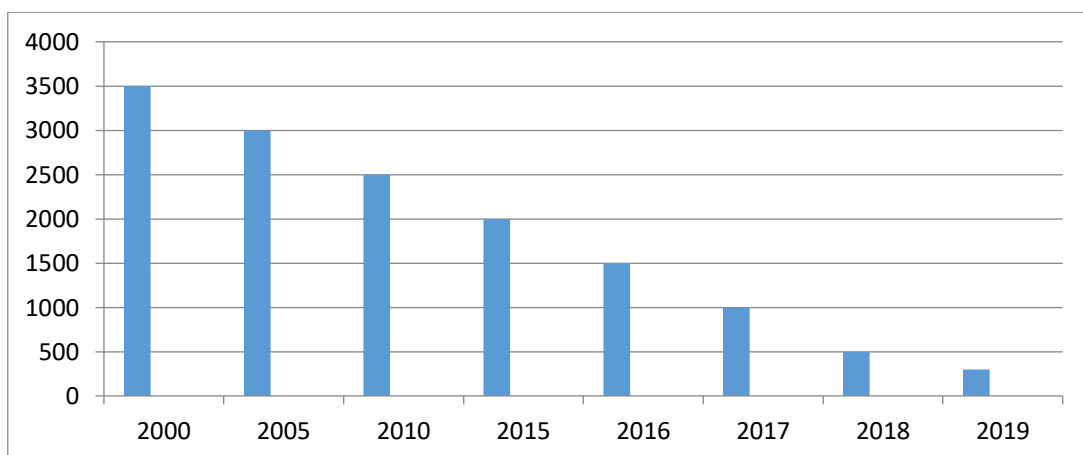


Figure1. Dynamics of joint-stock companies in the industry of Uzbekistan

As can be seen from the figure the volume of joint-stock companies have grown rapidly in numbers. If in 1991 the share of industrial GDP in the country

was 9%, in 2019 it would reach 37%. Its share in exports is also growing. In particular, from year to year, the range of industrial products is increasing.

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The growing diversification and clustering policies in our country have a great impact on these issues. It should be noted that on the basis of the localization program industrial products are increasing in all sectors of the industry, using the rich resources of our country.

Based on the industrial policy implemented by the Republic of Uzbekistan, the industrial sector is

growing rapidly than other industries. Particularly, this is the 2017-2021 document adopted by the country's leadership. The current strategy for the five targeted areas is already being implemented. Based on this program, each industrial sector has been developing and promoting investment projects until 2021.

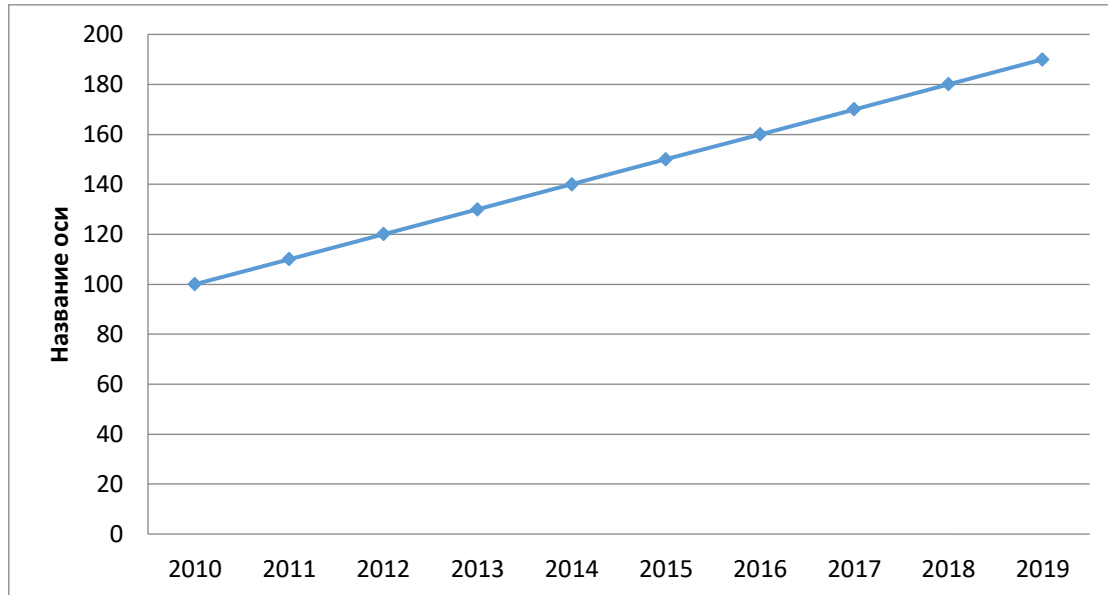


Figure 2. Dynamics of industrial production in Uzbekistan for 2011-2019.

For the development of the industry in the long term the quality and competitiveness of the products made up 40 billion sums. At this time, hundreds of percent of cotton produced in our country is being reproduced in our country. It should be stated that the economy of Uzbekistan has become an industrially developed state with full agrarian status. As we know, using the comparison method, you can identify the real situation in the economy. To understand the realities of industry development, it is necessary to compare its economy with other industries. The following table analyzes the development rates of industry in Uzbekistan with other sectors of economy. The analysis of the table shows that all the industries have grown rapidly in the recent period. The following situation can be observed when comparing the industrial sector with other sectors of the economy.

The development of industry in the conditions of market economy in Uzbekistan allows making the following conclusions:

- The industry should become a priority in the structure of the economy;
- Ensure structural transformation of the industry;
- Implement the industry with high technology and added value;
- Modernization, diversification in the industry, the development of a cluster policy;
- increase export capacity of industrial products;

- Increase the level of employment in industrial production, etc.

Corporate governance is a unique process not only in industrial production, but also in other sectors of the economy. From this point of view, the use of industry-wide corporate governance is a good way to do so. There is practically no experience of corporate governance in the industry of Uzbekistan. Therefore, it is important to study the mechanism of its introduction into the industry and increase the efficiency of corporate production. The key objective of introducing a corporate governance-based management mechanism in industry is to ensure that businesses benefit from a high level of enterprise balance.

The number of joint-stock companies in the industry decreased by 2049, mainly due to the unreasonable increase in the number of private owners to develop property relations not only in industry, but also in other industries, lack of sustainability of enterprises, even lack of sufficient funds for dividends, thirdly, the low level of authorized funds of joint-stock companies, the outdated management methods and others. By 2017 this situation has changed dramatically. The charter capital of the joint-stock companies was set at \$ 400,000. The action strategy program on socio-economic development of the country for 2017-2021 sets out the introduction of

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corporate governance in improving the management of the economy and its enterprises [9].

The main task of managers in industrial enterprises is to establish the corporate governance system in market economy under the most efficient management principles of the joint-stock company's activity. Without taking into account the general principles of introduction of corporate production, the activity of industrial enterprises cannot be effectively organized. At the same time, the main purpose of corporate production should be to increase the efficiency of capital investments by investors and shareholders. In this regard, it is important to consider:

- Strengthening the benefits of corporate production, based on the interests of the shareholders;
- Same attitude towards all shareholders in corporate production;
- Ensuring compliance with the rights, rules and norms of shareholders listed in the corporate production system and the corporate code;

- Providing information on major shareholders for the development of corporate production.

Creation and regulation of a number of mechanisms for the growth of private industrial enterprises, especially large joint-stock companies, in the economy. Organization and development of organizational and economic mechanisms here is urgent because more workplaces are created, the tax code is considered to meet modern requirements, system of optimal pricing is created, effective management of savings.

Generally, two types of mechanism is important for the corporate development. From this point of view, organizational and economic mechanisms will be discussed separately. These organizational and economic mechanisms are important in corporate production, and their effective action is interconnected. The organizational mechanism of corporate production can be expressed as following Figure 3:

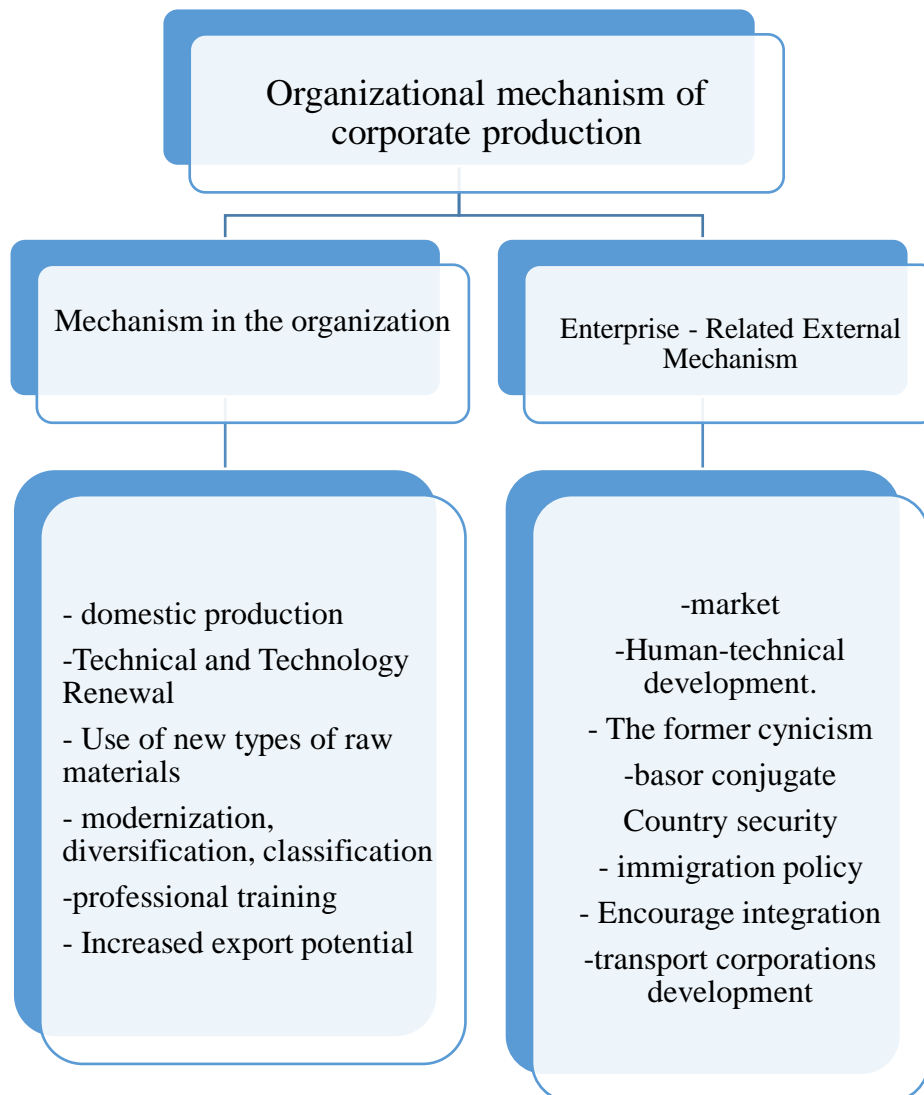


Figure 3. Organizational Mechanism of Corporate Transformation.

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Achieving stability enhancing its profitability and positioning corporate productivity is largely reflected in the well-being of the economic mechanism of economic integration. As of 23 September 2016, the number of joint-stock companies operating in our country was 675, the volume of issued securities amounted to 29,759.6 billion sums, according to the Central Securities Depository, as of September 14, 2016, 616 joint-stock companies (including 25 banks and 9 insurance companies), and the total amount of shares issued by them amounted to 46.75 trln. (8,77 trillion sums issued by the banks). The total number of ordinary and preferred shares in the circulation is 4.33 trln. is formed.

Discussion

The largest number of joint-stock companies is Uzpakhtasanoateksport (117 joint-stock companies, 1,86 trillion sums), Uzbekneftegaz (16,00 trillion sums), Uzbekenergo (41, 9.25 trillion sums) and Uzdonmahsulot (joint stock companies, 690.80 billion sums). At the same time, the authorized capital of the bank amounted to 232.78 billion sums, 43 commercial complexes and markets, operating in the form of joint-stock company.

As of 09.12.2016 number of joint-stock companies and securities issued by the regions. Total Converted to Million Yuan Total relative percent

1. Korakalpakistan. 22 3.3 71.3 0.2
2. Andijan 43 6.5 662.9 2.2
3. Bukhara 38 5.8 124.1 0.4
4. Jizzakh 18 2.7 307.6 1.0
5. Kashkadarya 47 7.1 181.5 0.6
6. Navoi 22 3.3 834.4 2.8
7. Namangan 29 4.4 151.8 0.5

8. Samarkand 32 4.8 90.9 0.3
 9. Surkhandarya 23 3.5 54.4 0.2
 10. Syrdarya 17 2.6 173.2 0.6
 11. City of Tashkent 50 7.6 1109.1 3.7
 12. Ferghana 46 7.0 443.1 1.5
 13. Khorezm 29 4.4 79.9 0.3
 14. Tashkent City 244 37.0 25540.9 85.6
- Total 660 100.0 29825.0 100.0**

Most joint-stock companies are located in the Tashkent region (228 joint stock companies or 37.01%, with 42,39 trillion sums or 90.66% of shares issued), and at least in Syrdarya region (16 joint stock companies or 2.59% billion sums or 0.36%). According to the data given above there are 244 joint-stock companies operating in Tashkent city, with a maximum of 24,500 (37.6 percent of total assets) and 25,540.9 billion sums (85.6 percent of total assets). At least 17 joint-stock companies operate in Syrdarya region. Surkhandarya region has the lowest share of securities issued by joint-stock companies, which amounts to 54.4 billion sums (0.2% of the total). This indicator is 469.5 times lower than in Tashkent. The share of each region in total volume of share-based companies and the total number of issued securities can be clearly seen in the figure below.

The analysis of data presented in Figure 1.2.3 shows that the share of securities issued by joint-stock companies in Uzbekistan among all regions of the country is considerably higher than the number of joint-stock companies. In other regions, this figure is relatively low. It would be expedient to pay attention to the territorial location of joint-stock companies to ensure further socio-economic development of all regions and regions of the Republic.

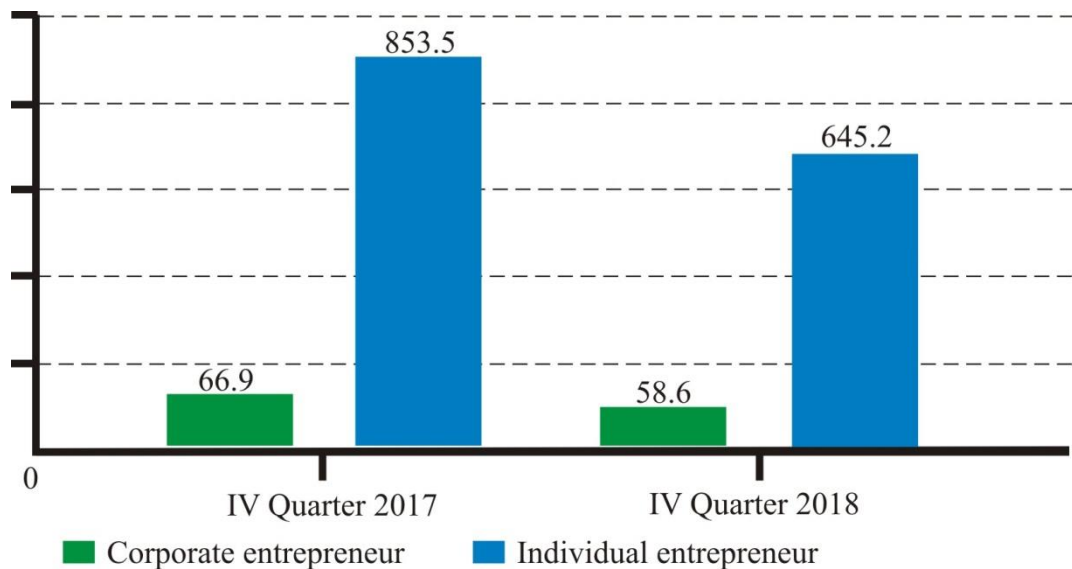


Figure 4. Comparative chart of the number of securities accounts, served by investment intermediaries (thousand pieces)

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The Central Securities Depository registers the rights to securities owned by 39 investment intermediaries and its clients by keeping their accounts. The number of depositors, clients of investment intermediaries having non-zero balances on the deposit account as of 01/01/2019 is 712.8 thousands of accounts, incl. 58.6 thousand or 8.2% of legal entities and 654.2 thousand or 91.8% individuals. Compared to the same period last year, the number of accounts the depot decreased by 22.5%.

(As of 01.01.2018, there are 920.3 thousand depositors, including Comparative chart of the number of securities accounts, served by investment intermediaries (nominee holders)(thousand pieces) 66.9 thousand, or 7.3% of legal entities and 853.5 thousand or 92.7% of individuals, of the total number of depositors.)The total amount of securities accounted for by investment intermediaries on 01/01/2019, at nominal value amounted to 4 836.8 billion sums, or 2,366.9 billion pieces of securities.

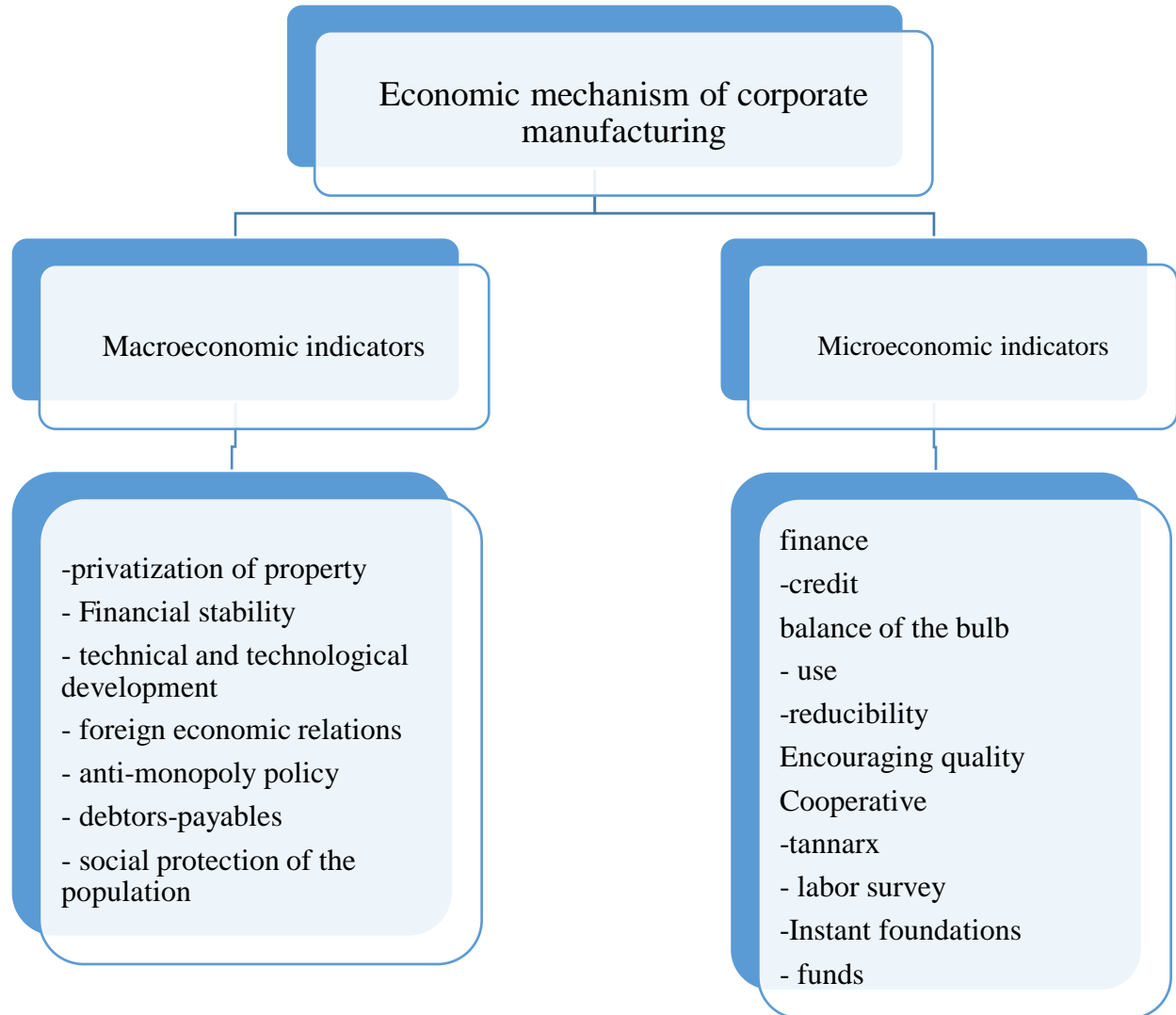


Figure 5. Model of economic mechanism for corporate governance management.

Analysis shows that economic mechanism of corporate governance management designed as above figure 5. It is described that corporate macroeconomic performance can be even wider, but in terms of sustainability and efficiency the most important is the stable economic relations. The mechanism of efficiency in corporate production is calculated by some of the most important coefficients. In practice, the following coefficients can be used to identify the

ways to ensure financial sustainability of industrial enterprises:

1. Solvency coefficient of the enterprise.

$$K1 = (Cf / kg) * 100 \text{ in this, } (1)$$

K1 - coefficient of solvency;

Sf - net profit;

Kg - creditor debt.

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The smaller the size of the debtor's debt, the higher its effectiveness.

2. Financial stability coefficient.

$$K2 = (Cf / Am) * 100 \text{ in this case, (2)}$$

K1 - stability coefficient;

Sf - net profit;

Am - turnover funds.

3. Absolute liquidity ratio.

$$K3 = (Cf / Kb) * 100 \text{ in this, (3)}$$

K3 - liquidity ratio;

Sf - net profit;

Kb - working capital.

4. Depreciation of fixed assets.

$$Ke = Qe - Qya * (Ue * Te) / Uya * Tya \text{ in this, (4)}$$

Ke - value of fixed assets;

Qe, Qya - the original value of old and new equipment;

Ue, Uya - annual productivity of old and new equipment;

Te, Tya - outdated and expiration date of new equipment.

5. Renewal coefficient.

$$Kya = (Fd / Qy) * 100 \text{ in this case, (5)}$$

Kya - refinement coefficient;

Fd - the value of the periodic fixed assets;

Qy - the end of the year.

6. The cost of liquidation of funds.

$$KT = Kt / Kd \text{ in this case, (6)}$$

CT - cost of liquidation of funds;

Kt - value of liquidated funds;

Kd- is the value of funds at the beginning of the periodicity.

7. Production efficiency.

$$Rk = (F / Af.q1 + Af.q2) * 100 \text{ In this case, (7)}$$

Rk - production efficiency;

Af.q-value of fixed assets;

Af.q2 - the value of the working capital.

Based on the above formula, financial stability of the enterprise is determined.

One of the fundamentals of corporate governance is an effective organization of corporate productions. Taking this into account, from the governing body of corporate governance, the proper organization of the workforce of the bottoms managers, the increase in their useful business coefficients, and the efficient use of working hours have a great impact on the effectiveness of the corporate governance mechanism. The board of directors, which is one of the key aspects of the organization of its operations, has been given an important place in the supervisory board.

It is expedient to use the foreign experience of the board of directors in the business of Uzbekistan. However, it should be noted that although this issue has been going on in foreign countries for many years, there are still differences in this issue. However, there are sufficient legal and regulatory documents on this issue. For example, external members of the US Experts Board were simultaneously a member of other

companies. Observers can often be professors and teachers of universities. However, members of the board of directors of one third to one-third of the members of the Supervisory Board. The advantages of supervisory boards with external members that exhibit industrial enterprises are that they can successfully evaluate the management of an industrial enterprise than a board member who has no work experience in the industry.

According to the law, there are no representatives of industrial companies in the German supervisory boards. Only members of the stockholders and members of the board of directors of the industrial enterprises are considered in the sectors.

It should be noted that there is little experience in industrial enterprises of our country. However, he adopted a number of decrees, laws and regulations on the activities of directors and supervisory boards. As for foreign experience in this regard, it is necessary to organize their activities based on directors and supervisory boards, their powers and responsibilities, taking into account the characteristics, principles and other aspects of their use in Uzbekistan [11].

The study of terminology of the evolution of the theory of corporate governance and the development of their concepts. These terminologies include Corporate Governance, Corporate Governance, Corporate Production System, Corporate Productivity, Corporate Culture. The study of the evolution of corporate governance is a theoretically significant one. Taking into account the broad definition of the concept of corporate governance, it was suggested that this problem would be promptly understood and it would be expedient to study the evolutionary development of these concepts in a timely manner.

Conclusion

In conclude, implementing corporate governance in industry development in Uzbekistan Central Depository of Uzbekistan visited Representatives of the information technology company "Mosaic" (USA). The main purpose of the cooperation is accounting services provided by the company and developed software for portfolio management papers. As well as the challenges facing the Central Depository of Uzbekistan in establishing interaction with the international central depositories "Euro clear", Clear stream. In March of this year, the Central Depository of Uzbekistan held meeting with representatives of the advisory mission of the Asian Development Bank, arrived in Uzbekistan to discuss issues of further development financial market of Uzbekistan and the preparation of technical specifications for diagnostic capital market research. Modern corporate governance system and approaches are now being tested in some joint-stock companies. The most effective models and programs will be implemented by developing sectors in Uzbekistan.

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Effective managing employees and other personals are only the best providers of company efficiency and productivity. By the sample of the developed

companies and multinational corporations is the predominant example for us to sustainable economic growth in all sectors of the economy in Uzbekistan.

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THE INTENTION – A CHOICE OR THE DOCTRINE OF ELECTION IN MAVARDI PRODUCT «A L-AHKOM-AS-SULTONIYA VA-L-VALOYOT AD-DINIYA»

Abstract: In this article analyzed the intention – a choice or the doctrine of election . In article is considered scientists used Ahkom as the main theoretical source in creating of their works on state governing, Mavardi's work "Ahkom consists of 20 chapters and 109 sections which the content and structure of the themes are given completely and logically consequently.

Key words: al-Mavardi, statehood, government, sunna, imam, sultan, vizier, emir, cadi (judge), manuscript, Allah, prophet, rasul, the Koran, hadith, shariah, ahkam, islam, valayat, ahl as sunnah va-l-jamo'a, madhhab, religion, aqidah, aqd, creed (e'tiqod), sunnah, faith (farz), vajib, salat; political information law, election, choise (tanlov), truce (sulh), advice (mashvarat), volition (ixtiyor), policy, Islamic law, public administration, contract.

Language: English

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Introduction

The well-known work of Mavardi is called «Al-ahkom-as-sultoniya va-l-valoyot ad-diniya» (the canons of sultanate and religious managements – further as "Ahkom"), its manuscript is in the fund of manuscripts and rare publications of National Library of Uzbekistan and consists of 185^{a-b} pages; and the manuscript which is in the Institute of Oriental studies named after Abu Raykhan Biruni of the AS of the Republic of Uzbekistan, consists of 107^{a-b} pages. In the given work about organization of the government and election of its head it is possible to say that according to historical source study, if in any state the elective and registered legislation and the selective system of statehood is observed, such state or the doctrine in work is considered as patriotic, fair and taking care of the people. The given source is also considered as the very first introduction of the doctrine, which has historically developed in X-XI century.

Materials and methods

The selective concept al-ikhtiyor [the selection of the most worthy and the best among the nation, selection or freedom of choice] is especially important historical basis of elective principle. In this work, the election of imams is considered as a desirable choice of the population – umma (nations) (*ahl-ul-ikhtiyor*) that is an indicator of political-legal task of the state office-work.

Mavardi expresses his opinion on worthy candidates for the post of imam - the head of the country, and elections of the most worthy one among the candidates, and shows two best ways for elections on a lawful basis:

The first one – choice of the worthy head by means of meeting of wise men – «*Ahl ul-khal va-l-akd li-l-ikhtiyor*».

The second one – determination of legality or illegality of choice of the previous imam-head.

The members of the socio-political administrative representation should accept the selective-compulsory status of the head of the country.

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Mavardi in "Ahkom" writes the following: «before the most worthy one is elected among the people and becomes the head of the country, the social groups are basically subdivided into three stratas» [1-7].

The first strata – structure of «*ahl ul-ikhtiyor lil-imom*» which chooses the worthy candidate for the head of the country: Mavardi shows the norms of election of the candidates, who come from common people and considers that this candidate should have the best virtues to become the imam. Besides, he considers that there should be a certain administrative institution for election campaign, indications of successor to the throne, its definitions and selective consideration.

As a result of this, he has laid the foundation for the special selective establishment – «*al-akhom makhkamat istikhyor al-khossa*», carrying out the activity connected with elections, and has defined its theoretical parties. In its turn, as a political-legal and practical basis of the above-stated establishment, he has developed the thorough system of rules and laws of selective process. According to the Mavardi's doctrine of intention:

– The council-committee developing the general laws and rules of selective system on management of the state at the election of sultan («*kavoidi akhom as-sultoniya li-l-ikhtiyor*»);

– Eminent wise men, politicians, mutaccalims, jurists who have been chosen from the territorial unit of the country and the meeting of members of presidium («*zhumkhuri ahl al-akd va-l-khal min kulli balad*»);

– Meeting of politicians, jurists chosen from the territory of country for an establishment of control over the meeting of electoral committee («*zhumkhur al-fukakho va-l-mutakallimin*»);

– Meeting which gives the consent of associates of the Prophet («*ahli shuro*» - the deputies of Olii Majlis (Parliament) or meeting of advisers);

– Meeting of ulema – tabeins who are the contemporaries of *khulafoi roshidin* – great scientists of that period («*ulema al-asr*» and «*ulema at-tabein*»);

– The meeting showing the successors to the throne on the conclusions of the special elective conclusion («*akhkom al-ukud al-khossa*») on a post of the head of the country from recognized a priori candidates;

– Consultative meeting of scientists of that time («*al-majlisu ahl al-mashvarat*»);

– Meeting which considers a post of the head of the country and a condition of appointment to this post («*akhl al-khal va-l-akd li-l-imam*»);

– The meeting, which is summing up the conclusions of members of an academic council and the elections inspector for the election and appointment of the head of the country («*akh lat-takhkim li-l-ikhtiyor*»);

– Elective presidium of the head of the country («*akhl al-ikhtiyor li-l-imam* »);

– Special elective presidium for the election of the head of the country («*akhl al-khal va-l-akd li-l-ikhtiyor al-imam al-khossa*»);

– A mutual consent and election of special electoral presidium consisting of five, six, three, two, of one member ("*rizo li-l-ikhtiyor*");

– Responsible management for the elective process, consisting of known scientists of that period («*al-majlisu ahl al-mashvarat*»).

In Mavardi product "Ahkom" the politically-legal bases of elections and a choice of the worthy candidate for the post of the head of country – the imam and participation in elective process of the aforementioned authorized bodies system – members of committee are specified. Better to say, the representatives of the first strata choose worthy candidate for the post of the head of country on the basis of such various criteria as kindness in relation to the people, mercy, responsibility for safety of society and people, understanding of the time and political system, and all of them should come to a common opinion – *ijmo*.

The second strata– the representatives- selected, i.e. group of candidates for the post of the head of country – «*ahl al-imam*», and among them, the most worthy is elected for the post of the head of country.

The third strata – unauthorized persons, remained out of aforementioned two Muslim societies, and it is impossible to force them to elective process of the head of the country - imam. As this third strata is considered as authorized representatives of socially neutral society, and they are free citizens of the country [8].

After presence of candidates on the post of the head of country – the imam, the legal, political and standard conditions for two groups are defined.

Mavardi in "Akhkom" puts the following three standard requirements and conditions on responsibility of «*al-akhkom mukhokamat istihyor al-imom al-khossa*» before the special elective group, showing the candidate on a post of the head of country:

1.The head of the country should be a fair, clever, formed and intelligent person.

2.He should own the necessary knowledge, which is required for fair management during his leadership. It is required to specify a family tree of the candidate, activity of office-work, the knowledge, supervising ability and experience.

3.If the number of candidates on a post of the head of the country – the imam exceeds one, it is necessary to choose the most worthy one for the country and society government [9].

The electors of candidates for the post of the head of country – the imam, are required to choose the most worthy, necessary on circumstances, intelligent, the most capable and distinguishing special questions.

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They should own strong mind to define the possible head - the imam, among the candidates.

According to Mavardi, the capital electors of the head of the country – the imam, among the candidates have no advantage before the electors of regional meeting. Perhaps, all citizens of the country have equal political options, and in their turn, they also can be elected. It is necessary to appoint the impartial person for definition of a choice of the worthy candidate for the post of the head of the country. Similar to this, the head of the country – the imam, is elected not because of religious reasons, but because of customs and ceremonies. In the course of elections, the regional voters, which names are specified as the imam – the head of the country, should be one of the «members of meeting of presidium, mutakallim, jurist and an eminent wise man – politician, selected among regional units of the country», the managing director on business management of selective campaign and the authorized representative. It is even provided, that the regional representatives as the candidate from «*zhumkhur al-fukaro va-l-mutakallimin*» can operate the presidium for the management of business of selective campaign or they are chosen as a member.

As he is required within the limits of powers of the head of the country – the imam, to have sufficient knowledge for the post of imam – the head of the country, from this follows, whether he is worthy for this post or not. He should consider which of the persons of the given region owns sufficient both worthy knowledge and experience for the management of business of the head of the country [10].

In Mavardi's work "Akhkom" in «section about two ways of an election of imam – the head of the country» it is said about the rights and duties of imomat and hilofat - the government, elective means «*Ashobi ikhtiyor ahl al-akd va-l-hob*» or the choice – intention of the former imam – the head after the manner of election can be one of two forms.

As indicated in Mavardi's work "Akhkom", the imomat (government) organized by means of an elective way and within the limits of its organizational rules has some opinions:

1.If the main elective state jury «*Ashobi ikhtiyor ahl al-akd va-l-khol*» will not receive a universal recognition, then it is not in forces to organize and found the imomat – the state government, because the head of the country through this choice obtains an all-Union recognition and should be selected by means of ijmo.

However, the applied way bayat – a choice, at election of Its majesty Abu Bakra on a post of the head of the country – the imam, was not in the aforementioned form. Bayat is such a way of a choice, at which the present persons did bayat to him (elected him as the head of the country - the imam), and they did not wait the bayat from the absent persons.

2.The least number of members of the elective council, the special elective jury, required for the establishment of the state presidency, should be not less than five. The choice is considered natural, if they come to a common opinion, and the consent of one of them to a post of the head of the country –«*uduli bir-rizo li-l-ikhtiyor*» is taken into consideration. Mavardi, concerning this point of view, furnishes two proofs:

The first proof: at election of Its majesty Abu Bakr by means of bayat (a general recognition, a choice) the number of officials was five. Subsequently the people have recognized this choice of officials. The aforementioned persons were Umar ibn al – Hattab, Abu Ubajda ibn Zharroh, Sayyid ibn Khuzayir, Bishir ibn Sad and released slave Abu Khuzayfy Solim.

The second proof: Its majesty Umar could convoke the meeting «*al-majlisu ahl il-mashvarat*» consisting of six members –wise men «*ahl al-khal va-l-akd li-l-imam*», to give consent bayat in a kind "rizo" to one of councillors on a choice of the head of the country – the imam.

This theory is considered as the outlook of Islamic jurists – mutacallims from Basra «*zhumkhur al-fukakho va-l-mutakallimin*».

1.Other scientists from Kufa preferred to legalize the head of the country – the imam, by three persons of council. This theory allegedly was considered, as in the marriage union by means of one *vali* and two witnesses to legalize the marriage union. The recognition of khalifat is considered supposedly valid if two of the three witnesses give the consent, and the third becomes the head of the country. They adhered and protected such opinion: if two witnesses give bayat to the imam – to the head of the country, then the country leaders and the agreement of imamat is considered as brought to perfection.

2.According to scientists of tobeiin «*ulamoi asr va-t-tobeiin*» - contemporaries of khulafoi roshidin which were considered as great scientists of that time it was possible to found the imamat- the country management, by one person–. As a matter of fact, Its majesty Abbas said: «Give me the hands, and I give to you bayat» to Its majesty Ali. In this case, people have given bayat to the son of the uncle of Its majesty prophet Mohammed. At occurrence of this case, there were no doubts. It also was said: Abbas was the judge, and the decision (word) of the most preferable person is considered as making impression [11].

Mavardi in work "Akhkom" results the following doctrines about the ways of election of the head of the country – the imam: the elective council «*Ahl al-akd va-l-khal lil-ikhtiyori imam*» when they gather for the elections of the head of the country – the imam, they pay attention to available characteristics of candidates for the imam - «*akhvoli ahl al-imam*». The voters should not show slowness, i.e. should be resolute at bayat to the imam – to the head of the country, who possesses all virtues for this post,

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including «*yusrau an-nas*» - possessing ability to subordinate people instantly, more preferable and more perfect – «*fuzalo va akmal*», mujtakhid, which personifies all better qualities of people. In work "Ahkom" Mavardi considers that council of voters should choose as the imam – the head of the country, that one, who possesses the aforementioned qualities and whom they consider more adequately among the other candidates for this post. If the council of voters recommends one worthy person for a post of the head of the country – the imam, among the candidates, then the post of imam – the head of the country, is offered to this person. It is said, that if the person offered for the post of imam – the head of the country, gives the affirmative answer to elective council, then the duty of the imam – the head of the country, is entrusted to this person.

In work of Mavardi "Ahkom" the members of the council «*Akhkom al-ukud al-khossa*» as a result of announcement to them of the choice of imam – the head of the country, his future management over the country is universally recognized, and he becomes the imam. All Muslim community - «*koffat al-umma*» should make bayat to him and to obey orders, decisions and instructions of imam – the head of the country. If the answer on a post of imam – the head of the country, is negative, then the acceptance of imam – the head of the country, is considered compelled. Because the choice of imam – the head of the country, should correspond completely to independence principles «*akd al-khilofa*», on own option of the candidate. If he renounces the post of imam – the head of the country, then this post is offered to other person, who possesses all virtues of the future imam – the head of the country [12].

As Mavardi informs in the work "Akhkom", historically, in the middle Ages if for the post of Caliph – the head of the country, were nominated two persons, and the requirements and qualities of «*sivo*» demanded from them will be identical, in this case the preference is given to the senior «*asannakhuma*» on age. If on last criterion, i.e. on age, they are coevals, in this case plays role their authority and influence - «*kamol al-bulug*». According to the doctrine of Mavardi, in this case, in spite of the fact that one of them is more younger than another, contrary to a principle of a choice of the senior from them as imam – the head of the country, the preference is given to younger one, if he is talented, and he is given bayat, i.e. the young and talented person in this case has a full right to become the imam – the head of the country.

According to Mavardi if for the post of imam – the head of the country there is nominated one more candidate, and he possesses much knowledge and he is considered as «*alam*», and the second candidate «*ashjaa*» - is the brave and courageous military person, and upon request of time and situation, one of them is considered as appropriate on qualities and

requirements and is considered as «*ruyo*» for the post of imam – the head of the country, this person is to be elected.

According to Mavardi, upon request of time, at condition of state needs and positions, it is considered pertinent to reform and suppress revolts and any mutinies, and the need to peace and calmness is considered as an actual problem, the person, who is considered as excellent in respect of force and boldness has a full right «*akhak*» to take imamat – the country management into his hands [13].

In Mavardi's opinion, for favorable reforming of plots, false opinions, errors according to needs and country situation, it is necessary to prefer «*fazl al-ilm*», i.e. the person possessing knowledge in the field of the legislation and considered to be "*al-alam*" scientist, having in this case a full right «*ahakku*» for a post of imam – the head of the country.

Basically, it is possible to draw a conclusion that in the doctrine of intention Mavardi means the problems which decisions follow from situation. This fact testifies that he was very skilled politician.

In work "Ahkom" on a post of imam – the head of the country is to be elected that person who has sufficient knowledge for situations settlement in the country during the given period. Just as a presented person embodying features approaching the time and circumstance, the scientist who deduces the people from a difficult situation, the person who has military experience and political -economic knowledge, penetrating into general situations, the person who is considered worthy, and such talented person has a full right to become imam – the head of the country.

According to the doctrine of Mavardi, among candidates the preference should be given to such person who in difficult situations of time, at solving and reforming the inconsistent situations, has sufficient force, bravery, fidelity to the business, knowledge and all-round advantage in experience and is considered comprehensible on a post of imam – the head of the country.

At a choice of imam – the head of the country at a need in a choice of the person possessing all qualities of future imam – the head of the country, when the country appears in difficult situations of false sights of rebels, for reforming of such situations (who struggles idea against idea, knowledge against ignorance) it is necessary without tightening to choose the worthy person on a post of imam – the head of the country. Otherwise, as it is underlined in "Ahkom", the state and a society will fall into degradation.

In the conditions of the present XXI-st century in the world, in various situations and conditions, those, who possess knowledge in the field of economy and the finance, having talent, power and experience in a science and military affair, despite their age, should become the head of the state. Otherwise, decline and crisis in this state and a society is observed.

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According to Mavardi, every possible ways of an exit from inconsistent situations are specified and according to «*kavoidi ahkom li-l-ihdiyur as-sultoniya*» - the laws and rules for election of sultan in situations like «*uduli bir-rizo li-l-ihdiyur* » where one of two imams – candidates on a post of imam – the head of the country is elected, and this problem dares as follows:

1. According to opinion «*Ahli ash-shuro*» of consultative committee, it is necessary to refuse both inconsistent candidates. In this case, there is no obstacle for search of other candidates on a post of imam – the head of the country. To criticize one of candidates concerning the second, is considered as reforming of such inconsistent situation. In conditions like that, it is necessary to investigate critically the following third candidate.

2. According to opinion of some jurists, a disagreement between candidates on a post of imam – the head of the country, their distinctive features: the superiority and advantage of one of these two candidates does not interfere with becoming an imam – the head of the country. To dream about imamate – the country leadership is forbidden to nobody. In that case, when the candidate remains not to be elected on a post of imam – the head of the country, there is no obstacle in the statement of not selected candidate.

At occurrence of problems or disagreements between selective council, «*ahl al-ihdiyur*» - by group of voters and «*fukahoh*» - founders of the law, scientists, it is not considered expedient to demand refusal of the offer from each candidate to whom a post of imam – the head of the country was offered. At solving disagreements between two persons having the identical status and position whose nominee is offered on a post of imam – the head of the country, the opinion of jurists of this group is that:

1.1. According to opinion of the first group – between two persons is lot. If one of them wins, to him is given imamat - the country leadership and bayat – selected.

1.2. According to opinion of the second group - there is no need to throw a lot, and selective council – «*ahl al-ihdiyur bil-hiyor*» without addressing to a lot, intends to make bayat to each of these candidates, they are independent at a choice of this person on a post of imam – the head of the country.

At such responsible situations as the election of imam – the head of the country it is not supposed to throw lot and operate at random, because it is an important state affair, not a gambling. The solution of a problem by such way is illogically and consequently is not supposed.

If selective council, at a choice «*ahl al-ihdiyur*» has defined one candidate on imamat and this person in turn is considered one of authoritative, powerful and capable persons – «*afzal al-zhamoa*» of a certain community, there is no obstacle to that members of

selective council have transferred bayat to him – says Mavardi [14].

If one more person who considers himself better, proposes his nominee, this situation will not affect imamat of the first selected imam. If the second person makes a claim for a post of imam – the head of the country, and he is considered better", than the operating imam, in this situation it is considered *unworthy* to deprive imamat from the first selected imam.

The first selected imam has the full legitimate right «*ahak*» - to remain on the throne. According to the requirement of such situation, i.e. the first preferable imam selected earlier has before himself the best candidate possessing better qualities – «*mafzul*», this situation - to give bayat in this case to the best candidate, is considered as not finished.

In bayat, in spite of the fact that the following best person – «*mafzul*» has good reasons or a physical illness – «*marizan*», or a lack – «*gaiban*» (absence of body organ, a non-working condition, physical inability, a physical defect), if he is closer to heart of people - «*akrabu fi-l-kulub*» and possesses the superiority and high quality to subordinate the people, the choice of this second person as the imam admits *sahih* – fair and the nominee of the above-stated candidate having all advantages, is not put on the agenda [15] and is delete off the list.

If bayat is given to the person who possesses quality of "superiority" without physical defects, except the reasons set forth above, if the disagreement on imamat – the country leadership of the person who is much better on some qualities but has a physical defect, it is underlined the law of a management of the candidate and it is shown the following *ihtilof* – distinctions:

1.1.1. According to some scientists and, including Zhohiz [16] to give bayat to imam does not provide handing over the country leadership, electing of the head of the country, negotiating a treaty or condition «*akdi imamat*» with the head of the country. For, in the matters connected with Shariah and the right as *izhtihad* searches for new ways, styles, selective as council «*ahl al-ihdiyur*» should give bayat to the person, the second candidate, to more worthy – «*mafzul*» who has long-term experience as the head of the country and conducts fruitful activity in the country leadership too, rather than to the worthy candidate. In the event that imamat remains for the first selected "worthy" person, handing over the imamat to the second person «*mafzul*» is not supposed. In this form in Shariah laws, it is not established to do *izhtihad*.

2.2.2. In opinion of «*zhumhur ul-fukahoh va-l-mutakallimin*» jurists and *mutakallims*, the presence of preferable candidate «*mafzul*» is considered as clear from the point of view of the law and the most suitable is to do bayat to the first selected candidate «*afzal*».

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Finally, in such situations as presence of a nominee of the person «afzal», imam of «mafzul» persons is not an obstacle. On the contrary, Mavardi results the various examples from the theory and practice concerning a situation at which at presence of imam of «mafzul» persons, the imam can continue the management affairs of the country, the person «afzal» can supervise over affairs of justice and its activity is considered the same state important, as activity of the head of the country.

According to Mavardi, in the absence of the third alternative person concerning the person «afzal», personifying all advantages of imam – the head of the country, there is even more preferable person «mafzul», that it is considered fair, correct and noteworthy to select him on a post of imam – the head of the country, to do bayat to him.

Mavardi shows the new opinion that a raising of a question of the superiority of candidates on a post of imam – the head of the country, and their level of spiritual advantage perfection should reach perfection and be considered as a high and especially important business.

Meanwhile Mavardi states the point of view that a full right on a post of imam – the head of the country, «istihkak» - among the requirements establishing a hereditary management which has a related character, here again is not available any reasons or terms, noteworthy for an establishment of a full right [17], and puts forward the doctrine about a way of creation of the strong public state, refusing a management of dynasties.

If one person personifies all superiority for becoming an imam – the head of the country and in the absence of the alternative candidate possessing given criteria on a post of imam – the head of the country, in this case it is considered, the nominee of the third candidate on a post of imam – the head of the country is not shown. In this case, it is inadmissible to transfer the power of imam of the first candidate to the third candidate and to do bayat to him.

The candidate who conducts his activity in the country leadership and personifies all necessary characteristics for a post of imam – the head of the country has the right to propose the nominee for the second term of imam – the head of the country at the meeting «al-mazhlisu ahl al-mashvarat» (specialized council of the Higher election committee).

Mavardi, underlining a choice and intentions in a choice of imam – the head of the country, results opinion that without it, is possible to choose imam – the head of the country.

The islamic scientists and scientists of theological schools on a theme of appointment or not appointment of imam – the head of the country inform the following opinions:

1. According to opinion of some Iraq religious scientists, despite treaty provisions of imam – the country leadership, created by election committee

«ahl al-ihdiyur», he can govern the country, and the people can obey to him because the overall objective of election is a choice of imam - the existing head of the country. For, the person who has proposed the nominee should show all qualities for a post of imam – the head of the country.

Here it is possible to consider that Mavardi spoke about founders (imams) of the country. Means, the person who has founded the state, has the legitimate right to be imam – the head of the country for the rest of his life, tells Mavardi.

It is possible to result a lot of examples from histories of the state dynasties as this person has more rights, than the others to become the head of the country which he has created himself, and develops his country independently, providing the peace and rest.

1. According to the majority of religious scientists and mutakallims, the status of imam – the person who has come on the power cannot personally establish the imam – the head of the country because, the imam – the country leadership is based on election and a mutual consent, and it is handed over to the worthy candidate.

The selective council «ahl al-ihdiyur» with the conclusion of the contract with imam – the head of the country establishes imam – the country leadership.

Probably community «ahl al-ihdiyur» incorporates in one uniform union and under requirements of delivery of the contract on the state management – *akd* of imam their contract on acceptance of the country leadership is considered not perfect.

For, such *akd* – the contract is defined only by an election and will be improved.

In this case, some scientists come to such opinion: if there is comprehensively educated person on the questions concerning to *cadi*, such person is elected as a *cadi*. Just as, the person who personifies all worthy qualities on a post of imam – the head of the country is subsequently elected on this post.

The difference between *cadi* and imam – the head of the country consists of that, according to some of people, if only imam personifies all conditions for becoming the imam – the head of the country, he is elected the imam – the head of the country.

If the person embodies all qualities of *cadi*, he is elected as *cadi*. A post of *cadi* is some kind of substitution, and he should operate on behalf of imam – the head of the country.

The post of *cadi* lawfully is not established while «*mustanib*» does not demand to be elected as a *naib*. Becoming the imam – the head of the country is considered the right of mass, and this political right, which merges together between the rights of people and the rights of Allah.

After solving of the questions concerning to imam – to the country leadership, Mavardi results

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the following idea about obedience to imam – to the head of the country and about its duties. The special elective conclusions and laws «*Ahkom ul-ukudi silt-hossa*» about elections of successor to the throne on a post of the head of the country, candidates, whose nominees are put forward in advance by the elections, all Islamic society should know, how he has come on a post of imam – the head of the country.

But the personality, a name, original position, an origin of imam – the head of the country is considered to be an information known only to council of voters «*ahl al-ihdiyur*».

For, they on the basis of the existing documentary data elect the Caliph – the head of the country and do bayat to him.

Suleyman ibn Zharir [17] says that the knowledge of a sort and a name of imam – the head of the country is considered as important as knowledge of Allah and Prophet.

According to the majority of the scientists, each person should have sufficient information about imam – the head of the country. There is no need to have thorough and detailed information for each citizen.

But, if for any reasons the citizen is addressing personally to imam – to the head of the country, he has to know a certain name and a clan of imam – the head of the country. Meanwhile, only personally addressing to imam – to the head of the country is comprehensible to own some information on imam – the head of the country. It is like the people addressing to *cadi* should know some information about *cadi*.

As they are scientists, *khakims* and *muftis*, they give *fatwa* (the decision on any legal matter, taken out by the ecclesiastic on the basis of religion and Shariah doctrines, or the decision establishing acceptability of this or that actions from the point of view of Shariah) about things which are considered *khalal* (permitted, admitted by Shariah) and *kharam* (unlawful by Shariah).

For, the person who addresses to *cadi* on any problem has a full right to receive the general information about *cadi*. People, having personal problems, claims, and questions to *cadi* can receive data by a special way. Position concerning the imam – the head of the country is so. If each person from *umma* has to know special data of a certain sort, names, the person and a sex of the imam, each person who has arrived to the centre from close and distant regions, can receive a detailed information.

This provision can cause a disagreement and objection. Usually intrigues and adversary intrigues are stated in one provision. At business management of *umma*, the information sufficient for *umma* is given.

Only at distribution of this information, any revolt and instigation should not rise. Information should not extend without certain legal documents, the basis and *fatwa*.

In such situation those persons who supply the information about imam – the head of the country should receive a special power. By means of this power, they should reform actions of state affairs and contradictions.

Conclusion

Only personal data can be sufficient if it is accepted conditionally. Data of some people, and original characteristics of councils of people which they have sent, within the limits of the power are considered sufficient, tells Mavardi.

As it has been considered above, the given work and its author narrate how the statehood processes during historical times occurred. For this reason, all-round consecutive studying of the given product has an especially great value in a historical source study.

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IMPROVING SECONDARY EDUCATION QUALITY AND EQUALITY WITH COOPERATION OF INTERNATIONAL COMMUNITY

Abstract: The current stage in the development of pedagogical research not only in our country, but also abroad is characterized by increasing attention to the study of such integrative category, as "quality education", reflecting compliance education to the public and individual needs of people. Evidence of this can serve numerous international studies that assess the quality of education in different countries; ratings of states are established by this indicator, analyzed factors determining it, and ways to improve it in the leading education systems of the world. In this article we studied intensive reforming of Uzbek secondary education system and analyzed with various type views under international cooperation secondary source data. More than two years current education system upgraded and innovatively diversified into modern student targeted and result oriented methodology. By support of government and UN quality learning at schools predominantly increased. Globalization of education and integration with business lots of changes are in progress now in Uzbekistan. We deeply convinced that the main factor modernization via methods, financial and technical provides progressive knowledge based domestic education which oriented to international markets. Main objectivity of the current paper work is examining concept of quality of teaching, learning and education system by rising quality in the classroom. Final section distributed some suggestion regarding al outcomes from the research.

Key words: secondary education, education quality, reforms, international cooperation, Uzbek, education system, effectiveness.

Language: English

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Motivation, engagement and student voice are [critical elements] of student-centered learning. Without motivation, there is no push to learn; without engagement there is no way to learn; and without voice, there is no

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authenticity in the learning. For students to create new knowledge, succeed academically, and develop into healthy adults, they require each of these experiences.

Toshalis, E., & Nakkula, M. J. Motivation, Engagement and Student Voice, Jobs for the Future (2012, April)

INTRODUCTION

To achieve changes in what is happening in the hearts and minds of millions of children, and that's what the main goal of any school system is, is not an easy task. There are many ways to improve the school system, and there is no consensus in the pedagogical community as to which one is the most effective. The difference of points of view on the way of reforming school systems is reflected in the numerous discussions of this problem being conducted in different countries. However, school leaders cannot afford the luxury of uncertainty. Few of them have political and other resources that allow them to reform the school system exactly as they see fit. Therefore, it is important to study all that is known today, to identify the factors that are crucial, and to develop the most effective development strategies. The experience of the best school education systems shows that three factors play a decisive role:

- 1) it is necessary that the right people should become teachers;
- 2) should give them training that would allow to increase the efficiency of teaching work;
- 3) it is necessary to provide conditions under which every student without exception would receive a quality education.

The results of the study show that in the most advanced countries in this regard, there are systems organized in such a way that all these factors work regardless of the cultural context with which to deal. They argue that a significant improvement in learning outcomes is achievable, and in a short period of time. And they make it clear that by drawing appropriate conclusions from this experience, adjusted for the conditions under which the reforms are carried out; it is possible to achieve noticeable favorable changes in the school system of the whole world.

UNICEF works in close cooperation with development partners and donors to assist the

Government of Uzbekistan in improving quality and efficiency, basic education, as well as in ensuring equal access to education for all children. This is done through the implementation of the Qualitative Secondary Education (CSR) program and the introduction of the "School of Friendly Relationships in the Nursery" program in Uzbekistan, which is a powerful tool for ensuring not only a high level of education, but also children's rights. In the concept of CSR, children are at the center of the educational process, and the quality of education is measured by indicators such as performance, health, safety and protection, participation, gender equality and inclusiveness (that is, education of children with disabilities in ordinary school). In addition, this concept stipulates that teachers should have appropriate skills and can use student-centered teaching methods to improve learning outcomes, as well as the fact that the school creates a favorable, healthy and safe environment for children, so that they can get the most full development of their potential with the support of parents. [1]

RESULTS

Secondary education focuses on internationalizing education, sharing the UK's expertise and innovation around the world, and bringing education partners together to work on collaborative projects. Current work in society helps citizens and institutions contribute to a more inclusive, open and prosperous world and connects local issues to global themes, ranging from social action to diversity and youth issues. Available programmes in partnership with local and international organizations who provide expertise in areas such as youth and social entrepreneurship, equal opportunity and diversity, migration, social inclusion and engagement, and active citizenship. [2]

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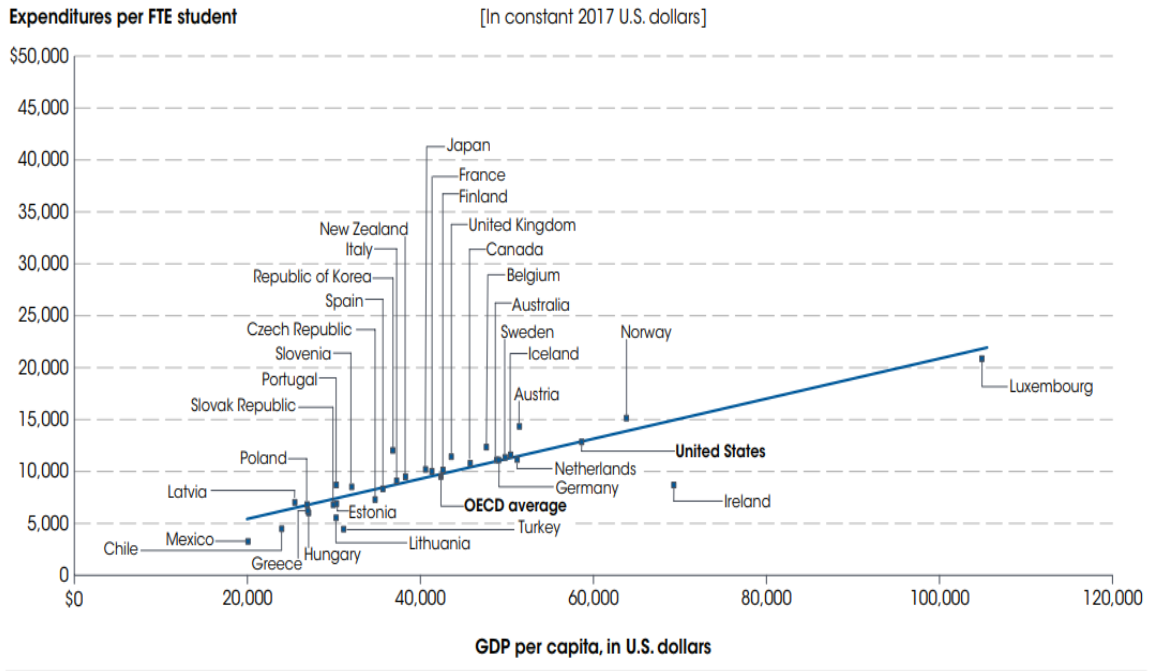
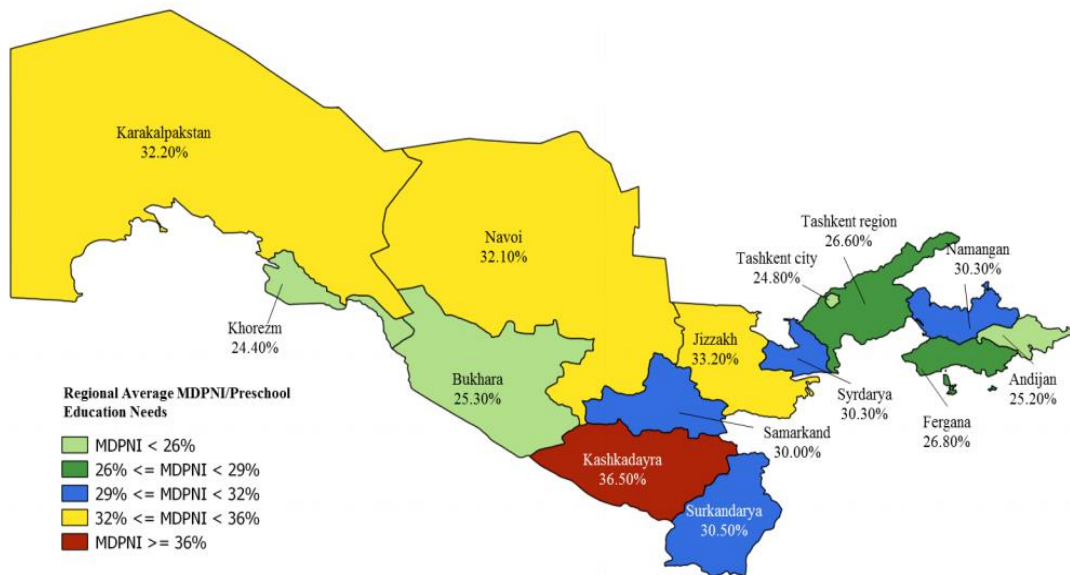


Figure 1. Expenditures per full-time-equivalent (FTE) student for elementary and secondary education in selected Organization for Economic Cooperation and Development (OECD) countries, by (GDP) per capita: 2015

Source: Online Education Database, retrieved January 11, 2019, <https://stats.oecd.org/Index.aspx>. See Digest of Education Statistics 2018, table 605.10.

A country’s wealth (defined as GDP per capita) is positively associated with its education expenditures per FTE student at the elementary/secondary and postsecondary levels. In 2015, of the 14 countries with a GDP per capita greater than the average of OECD countries that also reported data for elementary/secondary education expenditures per FTE student, 13 countries had elementary/secondary education expenditures per

FTE student that were higher than the average of OECD countries. These 13 countries were Luxembourg, Norway, the United States, Austria, the Netherlands, Iceland, Sweden, Germany, Australia, Belgium, Canada, the United Kingdom, and Finland. The exception was Ireland, which had lower elementary/secondary expenditures per FTE student than the average of OECD countries (\$8,700 vs. \$9,500). [3]



Map 1. Uzbekistan Lagging Regions by Multi-Dimensional Preschool Education Needs (MDPNI) Ranking
 Source: World Bank, 2018a.

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Uzbekistan is facing significant demographic pressure, particularly for the age group 0–7, and its extent varies across regions. The effects of a growing population are already visible in Namangan, where the population aged 0–3 grew on average by 4.5 percent between 2013 and 2016. This exerts further pressure on the education system, in a region where on average about 1,000 students enroll in each GSE school located in urban areas, and where 64 percent of GSE schools operate in double shifts.[4]

In December 2016, the GoU approved the “Program for Further Improvement of the Preschool

Education System from 2017 through 2021,” with the overarching goal of improving the quality of preschool education. This national program aims at:

(i) creating conditions for comprehensive intellectual, emotional, aesthetic, and physical development of children, based on international best practices;

(ii) improving the quality of preschool education, and preschool children readiness, based on widely adopted international practices; [5]

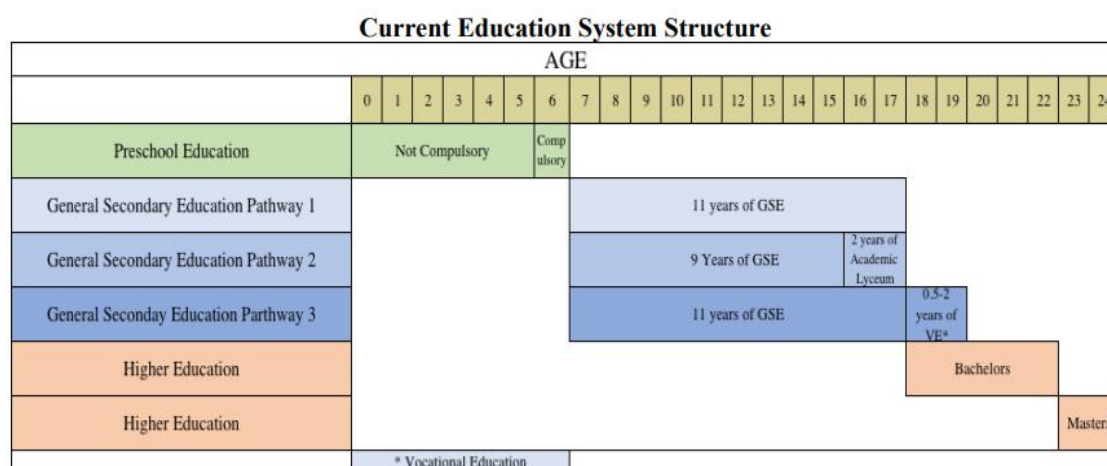
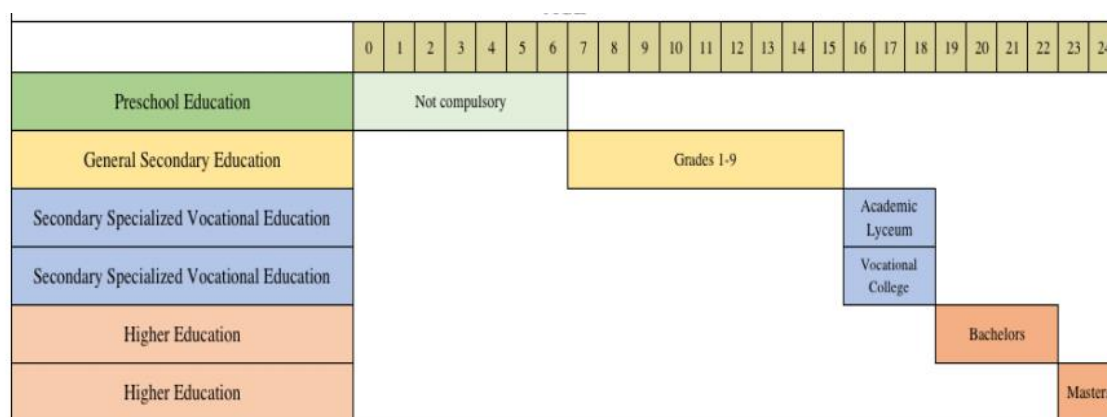


Figure 2. Education System Structure Prior to 2017/18

This is the current secondary education system of Uzbekistan. It clearly states that levels of the each age and period of studies by structure as shown figure 2.

Table 1. Objectives of UN's Assistance Framework 2018-2020

Objective	UN Organizations
Output 1: Improved national gender-sensitive education policies and plans to advance equitable access to quality Early Childhood Care and Education, general secondary, and higher education through a system-wide, lifelong learning approach.	

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	United Nations Children’s Fund (UNICEF) and United Nations Educational, Scientific and Cultural Organization (UNESCO)
Output 2: National capacities strengthened to deliver and measure learning in line with competency-based curriculum and the concept of the global citizenship education.	UNICEF, United Nations Population Fund (UNFPA), United Nations Office on Drugs and Crime (UNODC)
Output 3: By the end of 2020, national teacher/teaching workforce policies enhanced, and teacher training programs improved in line with the national quality education framework.	UNICEF, International Labour Organization (ILO), UNFPA, UNODC
Output 4: By the end of 2020, local education authorities and communities are equipped with tools and skills to encourage demand for quality basic education and preschool services	UNICEF

In addition to the UN organizations, various other local and international organizations provide support to the education sector in Uzbekistan. These

include aid from the governments of South Korea, Japan, the United States, and others.

DISCUSSION

Table 2. Development Partners' Support to Education in Uzbekistan

Level of Education	Partners
General Secondary Education	<p>The World Bank Group. Finances analytical work and lending in general secondary education.</p> <p>GPE. Finances general secondary education and analytical work.</p> <p>“Korea Education Center” under the Embassy of South Korea. This education center delivers Korean language teacher training courses and other cultural and scientific events.[6]</p> <p>Korea Education Research and Information Service. Based on an agreement signed by the Multimedia Center for Developing Education Programs under the MoPE, this research service provides exchange programs on information technologies (IT) development in education.[7]</p> <p>British Council. Active from October 1993, the British Council provides training of English teachers and promotes interactive methods in education.[8]</p> <p>Goethe Institute. Located in Tashkent City, the Goethe Institute provides training of German language teachers and promotes interactive methods in education. The institute also administers international standard language testing.[9]</p> <p>JICA. Volunteers of JICA help to organize different events in general secondary schools, preschools, sport schools, music schools, and different cultural ceremonies.[10] Korea International Cooperation Agency (KOICA). This agency has a number of volunteers working on teaching Korean language in different schools in Uzbekistan.[11]</p>

Source: Uzbekistan Education Sector Analysis Final Report, December 27, 2018, World Bank Group.

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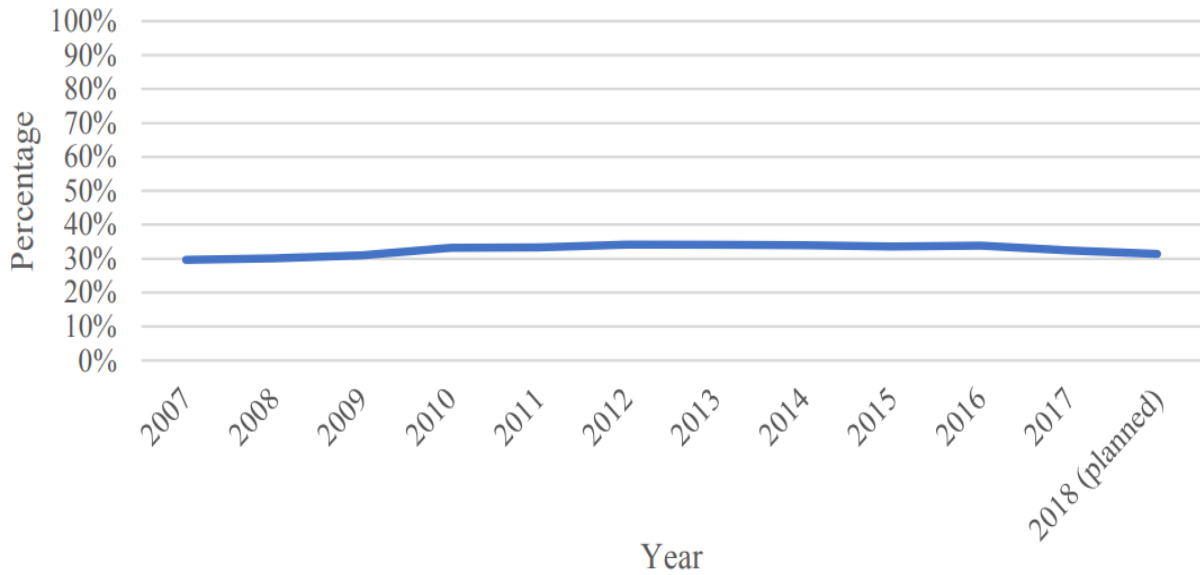


Figure 3. GoU Spending on Public Education as a Share of Total Expenditure, 2007–18

Source: Data from MoF was collected between 20th of February and 19th of May of 2018 as part of the ESA. All future references to the MoF.

GoU spending on education is also higher than average government spending in the Europe and Central Asia (ECA) region and other OECD countries. Uzbekistan’s allocation for education, which is expected to stay at approximately 31.4 percent of the government budget in 2018, 34 is higher than the average ECA spending on education and that of

OECD countries, at approximately 11 percent and 13 percent of total government expenditure, respectively. Public spending on education in neighboring countries such as Kazakhstan and Russia is also significantly lower (13.9 percent and 11 percent of public spending, respectively).[12]

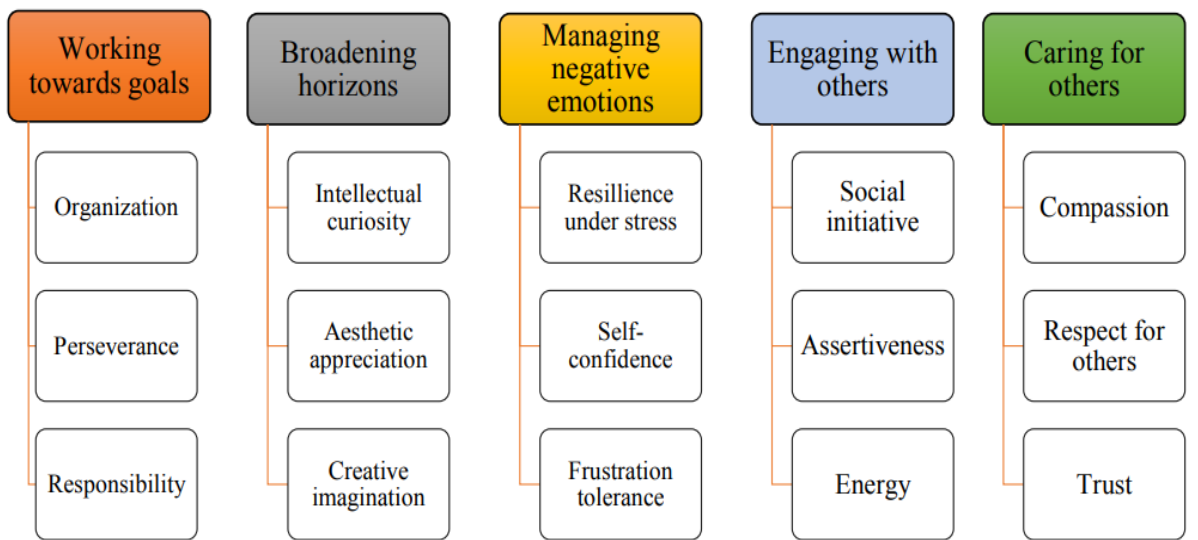


Figure 4. Socioemotional Skills Framework

Source: John and de Fruyt, 2015.

Multiple skills can be differentiated in each of the five broad domains. The multiplicity of lower-order facets suggests that each of the five domains represents a family of related but distinct socioemotional capabilities. For example, social initiative, assertiveness, and energy all belong to the

family of skills that facilitate engaging with others. Yet each does so in a different way: social initiative involves learning how to make connections with new people (e.g., a new teacher or new classmates); assertiveness involves students learning how to ask for what they need and stand up for their own rights

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and the rights of others; and energy involves learning to become enthusiastic and excited about activities and projects at school. Each of these skills can be taught, practiced, and developed in the school context.

Spend on teaching staff is by far the largest part of the budget, with support staff generally the next highest. So managing workforce effectively is key to overall efficiency and pupil outcomes. The schools stressed the importance of planning. Many of them

have multi-year strategic plans which they update regularly, as well as annual plans. Having clear workforce plans and structures allows them to react effectively when staff leave, not automatically making like-for-like replacements, but taking advantage of the opportunity to move where possible to their preferred structures without the need for costly and disruptive redundancy programmes.

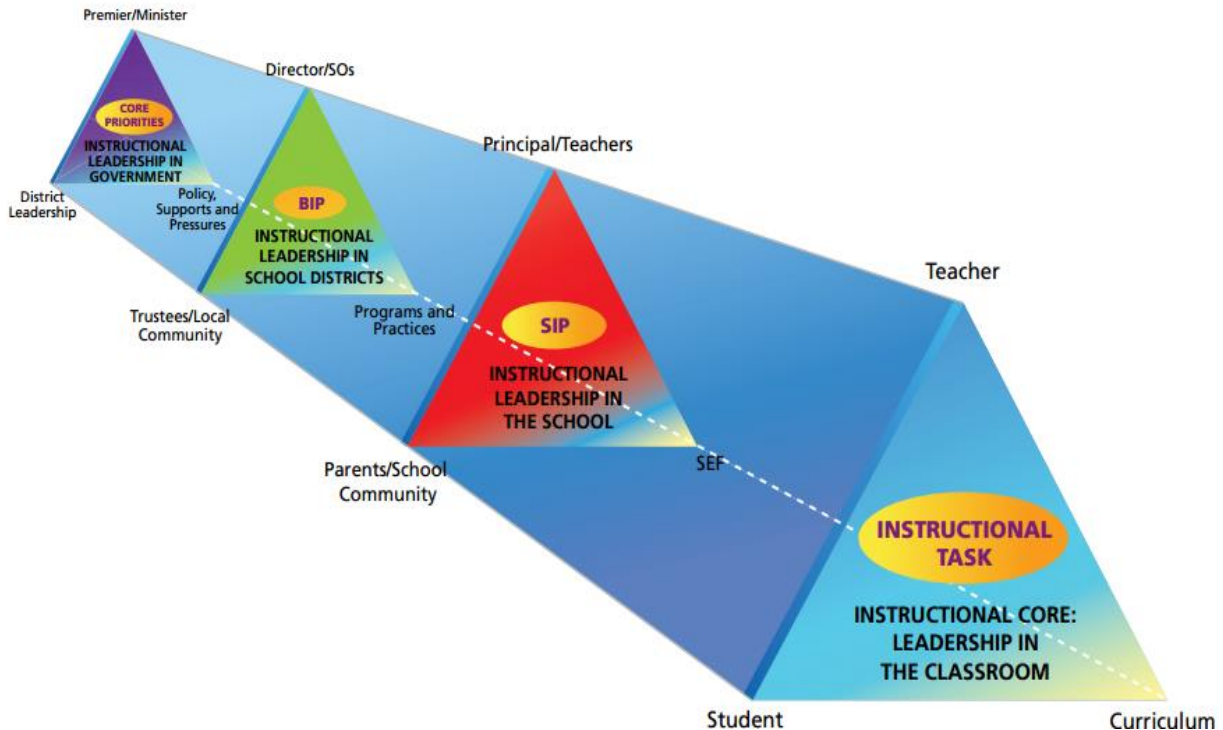


Figure 5. Improvement Planning and School Self-Assessment [13]

Source: *The School Effectiveness Framework K–12*, page 5.

This prism illustrates:

- how provincial direction, district priorities, school improvement efforts and all learning environments exist to support student achievement and well-being.
 - how focus and energy on the instructional core are key to teaching, learning and leading in Ontario.
 - how both qualitative and quantitative classroom data inform school planning, which in turn informs the district and province about student learning needs and well-being.
 - the necessity of coherence among policy, programs, implementation and professional learning
- Assessment is connected to the curriculum, collaboratively developed by educators and used to inform next steps in learning and instruction.

At the school:

- Expectations, goals, criteria, tasks and assessment are aligned and planned concurrently.

- Quality evidence of learning is determined collaboratively (e.g., through moderation, lesson study, co-planning) across grades, courses and pathways to determine student learning needs.
- Meaningful tasks, activities and experiences are designed to:
 - foster thinking and metacognition
 - build on students' diverse perspectives, knowledge and experiences
 - assess the depth of new learning in order to identify next steps.

In the classroom:

- Assessment for and as learning processes are evident as students undertake authentic and relevant performance tasks.
- Educators and students co-construct success criteria in relation to authentic and relevant performance tasks.

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- Multiple and varied opportunities are provided for students to demonstrate, communicate and refine their learning.

- Student learning is regularly documented to inform educator and student next steps.

- Students are supported and assessed in the ongoing development of learning skills and work habits.

Students:

- Actively plan for and set personalized learning goals that relate to the curriculum expectations.

- Engage in authentic and relevant performance tasks that are connected to their learning goals.

Barriers to efficiency

Some schools did not mention any barriers - while providing information was a burden they could see the justification for it as they were spending public money. The barriers other schools mentioned included:

- lack of capacity and capability for small schools;

- geographical restrictions making collaboration more challenging;

- lack of expert knowledge in areas such as ICT to take the best-informed decisions; and

- inefficient and inadequate premises.

All schools mentioned providing the best education they could for their children and the associated publication of attainment and Ousted inspections. Governors who provided effective challenge were also a key motivator. Many of the schools said that they had encouraged governors to be more challenging in a number of ways such as appointing people with strong finance and commercial skills, encouraging and providing training, and simply telling them to be more challenging.

Suggestions

- Further improvement of the quality and effectiveness of basic educational programs;

- Integration of child-centered learning methods into the national education system;

- Analysis of the possibilities of quality teaching and learning in small schools located in remote areas;

- Improving standards and programs of inclusive education, as well as improving their quality;

- Improving monitoring and evaluation at all levels of education in order to increase student performance, attendance at schools and the quality of teachers;

- Improving the Quality and Availability of Early Learning Opportunities;

- Improving Teaching Conditions;

- Improving Existing Standards and Assessment;

- Promoting Inclusive Education.

CONCLUSION

In conclusion, provide school quality lots of reforms are being implemented in Uzbekistan. Major international institutions support for the secondary education development program by curriculum, financial, institutional, technical and structural ways. Especially, cooperation in this field in behalf of by UNESCO, World Bank Group and OECD run different methodology by implementing experiences of the developing countries models. Additional funding was provided by Uzbekistan government is one more step forward for future. Totally reorganizing and restructuring of this system contribute relevant share for Uzbek youth. Ministry of Secondary Education of Uzbekistan effort on development school quality and equality by nations, race and ethnicity factor still stay in priority. This is providing best effectiveness in the classroom by remembering hot memories from the school ages among all classmates of any pupils.

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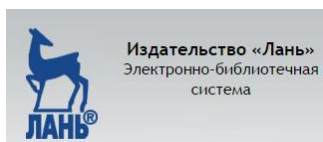
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