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UNIVERSITY CORPORATE CULTURE AND EDUCATIONAL IDENTITY IN THE ERA OF GLOBALIZATION

CULTURA CORPORATIVA UNIVERSITARIA E IDENTIDAD EDUCATIVA EN LA ERA DE LA GLOBALIZACIÓN

Alexei Zavorykin[1*]
E-mail: aazavorykin@fa.ru
ORCID: https://orcid.org/0000-0002-2426-8488
Svetlana Dronova[1]
E-mail: sydronova@fa.ru
ORCID: https://orcid.org/0000-0002-7487-5091
Ekaterina Pondo[1]
E-mail: ekaterina.pondo@mymail.academy
ORCID: https://orcid.org/0000-0002-4484-1982
Elvira Ganeeva[1]
E-mail: erganeeva@fa.ru
ORCID: https://orcid.org/0000-0001-6473-6576
Denis Akhmadeev[1]
E-mail: drahmadeev@fa.ru
ORCID: https://orcid.org/0009-0001-1596-2814
[1] Financial University under the Government of the Russian Federation, Moscow, Russian Federation.
*Corresponding author

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ABSTRACT

This study explores the dualistic nature of university corporate culture with a focus on its educational mission, contrasting "academic" and "entrepreneurial" models under the conditions of globalization. Using a mixed-methods approach that combines historical-comparative analysis, document content analysis of mission statements, and econometric modeling of Russian higher education funding, the research highlights how financial stability shapes not only organizational identity but also the quality and orientation of education. Findings reveal that well-funded universities in the West (e.g., Ivy League, Oxbridge) maintain the academic model centered on knowledge creation, humanistic values, and student development. In contrast, underfunded institutions in post-Soviet and Eastern European regions adopt entrepreneurial practices that prioritize market competitiveness and efficiency, influencing both teaching priorities and student outcomes. Regression analysis supports the hypothesis that resource scarcity drives educational adaptation toward the entrepreneurial model. The study concludes that sustainable funding and educational integrity remain decisive for preserving academic values in higher education, ensuring that universities fulfill their broader role as centers of learning and social development.

Keywords:

University corporate culture, academic model, entrepreneurial university, higher education funding, globalization and education.

RESUMEN

Este estudio explora la naturaleza dualista de la cultura corporativa universitaria, centrándose en su misión educativa, contrastando los modelos académico y emprendedor en el contexto de la globalización. Mediante un enfoque de mixtos que combina el análisis histórico-comparativo, el análisis del contenido documental de las declaraciones de misión y la modelización econométrica de la financiación de la educación superior rusa, la investigación destaca cómo la estabilidad financiera influye no solo en la identidad organizacional, sino también en la calidad y la orientación de la educación. Los hallazgos revelan que las universidades occidentales con buena financiación (p. ej., la Ivy League y Oxbridge) mantienen el modelo académico centrado en la creación de conocimiento, los valores humanísticos y el desarrollo

estudiantil. Por el contrario, las instituciones con financiación insuficiente en las regiones postsoviéticas y de Europa del Este adoptan prácticas emprendedoras que priorizan la competitividad y la eficiencia del mercado, lo que influye tanto en las prioridades docentes como en los resultados estudiantiles. El análisis de regresión respalda la hipótesis de que la escasez de recursos impulsa la adaptación educativa hacia el modelo emprendedor. El estudio concluye que la financiación sostenible y la integridad educativa siguen siendo decisivas para preservar los valores académicos en la educación superior, garantizando que las universidades cumplan su función más amplia como centros de aprendizaje y desarrollo social.

Palabras clave:

Cultura corporativa universitaria, Modelo académico, Universidad emprendedora, Financiación de la educación superior, Globalización y educación.

INTRODUCTION

The organizational culture of a higher education institution (HEI) serves as a key factor in its competitiveness. This competitiveness stems from attracting stakeholders through the development of compelling value orientations and principles governing internal interactions. Essentially, corporate culture functions not only as a vector for shaping the core competencies of staff and students but also as a marketing element within the higher education services market.

An HEI's code of ethics, like its corporate culture as a whole, is intrinsically linked to the organization's mission and goals. Corporate culture constitutes a primary mechanism for ensuring a high degree of order, functionality, and alignment among participants in internal organizational interactions. Furthermore, the complexity of the system within which these interactions occur leads to increasingly distributed motivations among its actors. Consequently, the ethical component becomes arguably the sole unifying factor structuring communications.

On one hand, examining the components and orientation of HEI corporate culture today—amidst the transition to a new technological paradigm characterized by increased integration of cyber-physical systems—represents a paradigmatic shift in researching the social role of higher education. Here, the university is conceptualized not merely as a training ground for specialists, but as an independent organizational unit. It competes with the "machine" of online learning and artificial intelligence capabilities, striving to forge a new cultural-psychological image of a sought-after expert community distinguished by unique professional qualities.

The concept of the "university-as-corporation," which should possess strategic ideas (values) concerning its socio-cultural mission, corporate philosophy for different stakeholder levels (students, faculty, administration), an informal institutional character, and unique "know-how," was established as early as the 1930s. In today's global information environment, this know-how makes interaction with the HEI's representatives a necessary alternative to other knowledge sources.

On the other hand, contemporary corporate culture exhibits a duality. Conceptually, this manifests as the presence of the organization's internal culture, focused on achieving the competitiveness of its output, and the culture embedded within the output itself (the graduate). This external layer of corporate culture embodies an image of success and inclusivity as one product of academic activity.

Nevertheless, the relevance of classical academic components within organizational ethics persists. These components remain resilient in many HEIs despite transformations in the economic and technological dimensions of graduate success.

Analysis of HEI funding statistics and the perception level of their corporate culture as either "innovative-entrepreneurial" or "traditional-academic" suggests a significant correlation. It appears that the formation of organizational values aligned with new economic-technological challenges and an "entrepreneurial" orientation correlates with underfunding in certain institutions. This finding potentially challenges the thesis, previously advanced by researchers such as Barber et al. (2013), which linked transformations in university culture primarily to the volatility of the external environment.

Therefore, the aim of this study is to identify, comparatively analyze, and evaluate the influence of key external factors on the formation and dominance of the dualistic models of corporate culture ("academic" and "entrepreneurial") in the modern university across different institutional contexts.

Research Objectives:

1. Empirically test the hypothesis regarding the dualistic influence of external factors (A - funding level, B - environmental innovativeness) on the formation of either the "academic" or "entrepreneurial" model of HEI corporate culture.

2. Analyze the specific manifestations of the "entrepreneurial" corporate culture model in HEIs of the post-Soviet space and former "Socialist Bloc" countries compared to classical Western universities.

3. Assess the relationship between HEI funding sources (public/private), socio-economic indicators (e.g., poverty levels), and the dominant type of corporate culture.

4. Identify key historical and institutional factors underpinning differences in corporate culture across HEIs from various regions.

This study aims to test the hypothesis concerning the dualistic influence of external factors (A – funding, B – environmental innovativeness) on the formation of HEI corporate culture.

MATERIALS AND METHODS

To achieve the aim of the study, a mixed-methods approach combining qualitative and quantitative techniques was employed:

- Historical-Comparative Method:

Used to analyze the evolution of corporate culture concepts in higher education (from medieval universities to contemporary models). This method facilitated the identification of historical antecedents and enabled a comparative analysis of corporate culture formation in classical Western universities (e.g., Ivy League, Oxbridge, Écoles Normales Supérieures, Imperial Universities) versus HEIs in the post-Soviet space and former Socialist Bloc (Russia, Poland, Uzbekistan, Belarus). The historical-comparative method provided arguments for historical shifts in the content of university corporate culture and their relevance to contemporary challenges.

- Document Content Analysis:

Conducted on official documents (mission statements, strategic plans, corporate culture codes) from leading global universities (Yale, Cambridge, MIT, Columbia, Chicago, Webster, Peking, Tsinghua – based on Times Higher Education rankings) and Russian HEIs (Vladivostok State University of Economics and Service (VSUES), Kuban State University (KubSU), Belgorod State University (BelSU), Lomonosov Moscow State University (MSU), Moscow Institute of Physics and Technology (MIPT), Bauman Moscow State Technical University (BMSTU), Peoples' Friendship University of Russia (RUDN), Belarusian National Technical University (BNTU), Tashkent State University of Economics (TSUE)).

Objective: Identification of declared value orientations and key distinctions between the "academic" and "entrepreneurial" corporate culture models.

- Secondary Data and Statistical Analysis:

Systematized and analyzed data on HEI funding, socio-economic indicators (population poverty levels), and R&D expenditures in Russia.

Sources: Official Russian Statistical Yearbooks (Rosstat), National Research University Higher School of Economics (HSE) data.

- Econometric Modeling:

A multiple linear regression model was constructed to test the hypothesis regarding the influence of funding levels and socio-economic context on the HEI's financial model (serving as an indirect indicator of pressure towards an "entrepreneurial" culture).

- Qualitative Case Study and Literature Analysis:

Analyzed specific cases of HEIs positioning themselves as "entrepreneurial" (e.g., VSUES) or maintaining classical traditions (e.g., MSU, MIPT, Western universities).

Synthesized findings from empirical studies by other authors on HEI corporate culture in Russia (Dremina et al., 2015; Kolychev & Budanov (2022); Titova, 2015; Petrova, 2018) and Poland (Dębski et al., 2020).

Objective: Interpretation of identified trends, deeper understanding of the causes and consequences of different culture model formation, and qualitative-level testing of hypothesis (B).

RESULTS AND DISCUSSION

Research into the organizational culture of educational institutions has a long history, dating back to pre-classical (medieval) and classical universities (18th century to the late 20th century). During these periods, the corporate culture of medieval universities was largely indistinguishable from the culture and ethics of scientific inquiry itself, or the so-called "professorial" culture. In contrast, the contemporary phase of studying academic organizational culture is characterized by a profound differentiation. This encompasses not only the separation between general scientific ethics and the specific academic culture of individual universities but also a bifurcation within university cultures themselves into distinct "entrepreneurial" and "classical" foundational paradigms.

Prominent contemporary research on HEI corporate culture includes the work of (Rüttinger, 1986), who investigated the exclusion of "commonly accepted values" from the corporate agenda; along with Braga da Cruz (2006), who assessed technological challenges to classical university culture. Within Russia and the broader post-Soviet space, however, the organizational culture of HEIs remained a relatively understudied phenomenon until recently.

Researchers from CIS countries primarily focused on fostering an "entrepreneurial" orientation towards corporate values within the university environment, a trend arguably linked to the stochastic development of market relations in the post-Soviet context. Key contributors in this area include (Melnik & Yunov, 2023; Petrova, 2018; Plaksina, 2023; Titova, 2015).

Notably, several works have laid groundwork for conceptualizing the influence of the ethical dimension on organizational and managerial transformations. Kotter (2011), in particular, emphasizes the primary influence of corporate culture on organizational change, framing it evolutionarily: only a fundamentally new culture, responsive to shifts in the technological paradigm and broader societal structure (economic, demographic, socio-political), survives and drives management modernization.

Much of this research correlates declared organizational values with the perceptions of employees and students, typically identified through comprehensive blind surveys.

The discourse surrounding contemporary HEI corporate culture is significantly shaped by the rise of information and communication technologies and the shift in the technological paradigm—the "Fourth Industrial Revolution." This shift has enabled broad societal access to structured information on virtually any topic, facilitated by cyber-physical systems and artificial intelligence. However, the potential devaluation of direct faculty-student interaction within academia due to widespread informational accessibility represents only part of the challenge.

A second, crucial factor is persistent socio-economic stratification, largely unmitigated by the extensive processes of globalization across its three forms (political, social, economic). While political and economic globalization have often negatively impacted economic growth and educational opportunities in developing and least developed countries, social globalization has demonstrably enhanced educational access. Crucially, however, this access has often manifested in an "anti-academic" direction, primarily through the relatively accessible internet. (Alvarado et al., 2021; Bataka, 2021; Bilgili et al., 2020), reached similar conclusions through empirical research. Unsurprisingly, HEIs exhibiting the most "anti-academic" corporate cultures tend to be located in countries with low per capita income, often characterized by emerging business structures or unstable market economies.

Finally, the historical context and the specific genesis of organizational culture within different HEIs constitute a third significant factor. Consequently, the corporate culture of "new" universities inherently diverges from that of the oldest Western institutions, whose culture is deeply rooted in traditions of internal self-governance.

The classical Western university model is founded on an early medieval corporate tradition emphasizing institutional separation from the state, epitomized by academic self-governance traditions tracing back to Antiquity. The University of Constantinople, for instance, existed by the 5th century, and the University of Bologna dates to the 12th century. In other regions, HEI formation occurred later, though colonial colleges in the New World largely inherited European traditions. In Russia, the concept for the Slavic-Greek-Latin Academy emerged only around 1600, with its establishment realized in 1685. Crucially, its foundational documents were Imperial Decrees and government-approved Charters. As Petrova (2018), contends, the emergence of the modern classical university occurred much later, conventionally dated to the 18th century. From this period, core university values included: fundamental and humanistic education, an emphasis on scientific research, and institutional autonomy.

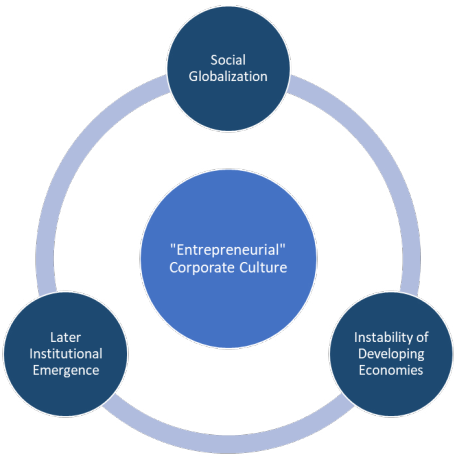
Consequently, the most significant transformation of classical corporate values occurs in developing countries. This transformation is linked to challenges in establishing societal well-being and often unfolds on the unstable ground of "young" HEIs. Within this context, the student is frequently positioned as a "product" rather than an active agent in university relations. The role of the faculty member is also transformed, diminishing the professoriate's traditional "spiritual aristocracy" to that of an employee-executor. The focus shifts from the pursuit of scientific truth or the humanistic application of knowledge towards the sheer commercialization of outcomes for the benefit of the employing organization.

One highly influential publication discussing educational changes pertinent to university corporate culture is the essay "An Avalanche is Coming: Higher Education and the Revolution Ahead" by Barber et al. (2013). The authors warn of the dangers of informational atomization in higher education—the creation of communities possessing vital human knowledge but unburdened by ideals of reasoned collectivism, thereby propagating an ideology of self-sufficient individualism.

Thus, a critical question arises concerning the relevance and humanity of the contemporary "entrepreneurial" HEI corporate culture model versus the "academic," classical paradigm.

Figure 1 illustrates the specific dynamics shaping contemporary models of academic corporate culture under the influence of globalization, technological revolution, and historical context.

Fig. 1: Factors Shaping Modern Academic Culture.



Source: Prepared by authors

For instance, Vladivostok State University of Economics and Service (VSUES) explicitly positions itself as an "entrepreneurial university" on its official website. It highlights core components of this model, including professional management, a conducive innovation environment, broad access to corporate information, the creation of project teams, and the cultivation of an entrepreneurial culture. Their analysis yielded an ambiguous conclusion regarding the necessity of universal staff approval for any corporate culture changes to prevent dissonance between real and declared values. The university's stance fundamentally assumes that certain values—such as professionalism, competence, initiative, and responsibility—are not inherently present in staff or students. Instead, these qualities must be cultivated according to the institution's internal criteria, intrinsically linked to its "entrepreneurial" status.

A similar approach is evident in the "Code of Corporate Culture" of Kuban State University (KubSU). Principles like "labour motivation" and "economic sustainability" are explicitly applied to the behavioural culture of both faculty and students. Comparable value formulations are found at Belgorod State National Research University (BelSU). However, this cultural status of an "entrepreneurial university" finds little resonance within the established Western university tradition. Consequently, it can be argued that the very goal of shaping individuals within a framework of "market" values is not part of the broadly understood, global model of university corporate culture. The trend towards fostering a culture of "entrepreneurial adaptation" appears to be largely confined to the post-Soviet educational cultural space.

According to the authors, Aleinik & Rasskazova (2022), elevate the "entrepreneurial" orientation to an absolute necessity for the modern HEI, framing resistance as "anti-culture" for universities not focused on "economic efficiency and competitiveness".

These researchers also posit the existence of two distinct currents within contemporary university corporate culture: 1) The "Corporate Culture of the Entrepreneurial University", focused on creating competitive educational and expert "products"; and 2) The "Subculture of the Faculty", encompassing classical academic values, tradition-oriented, which relates to students only indirectly as it does not explicitly foster "business competencies."

Furthermore, maintaining this "entrepreneurial" organizational culture type often involves partnerships with large corporations developing long-term talent pipelines. Examples include inter-university projects like VTB Bank's "Banking School", the Novolipetsk Metallurgical Plant's "Ticket to Life" program, and talent development initiatives by major consulting firms. Employer-partner demands significantly shape this "entrepreneurial" approach. They increasingly seek graduates who are not merely responsible employees but effective members of entrepreneurial teams, sharing not broad cultural values but specific, business-aligned ethical norms suited to the volatile market economies of the post-Soviet space.

Contrastingly, Russian and international scholarship (Abdalina et al., 2020; Kapitonov et al., 2005; Rüttinger, 1986) describes an alternative approach categorizing corporate culture types based on the foundation of collective acceptance and shared purpose. Kapitonov et al. (2005), identifies three types: "Psychological" (organic – values accepted based on shared personal beliefs), "Social" (bureaucratic/market – based on partnership/interaction values), and "Economic" (participative – based on achieving mutual benefit). Similarly, Rüttinger (1986), links a culture of "short-term entrepreneurial success" to high interpersonal behavioural/motivational demands within the team, weak ties to organizational traditions/history, and an orientation towards "instant" gain.

A degree of "speculative" culture might be inherent in many students, yet it remains fundamentally alien to leading global universities. Here, institutional traditions are perceived as lifelong elements of a graduate's identity (e.g., institutions within The Ivy League). Crucially, Ivy League universities are also among the world's wealthiest academic institutions, enabling them to attract top faculty and affluent students. A similar dynamic exists in other globally elite and commercially successful university groups like Oxbridge (UK), the C9 League (China), Écoles Normales Supérieures (France), and Imperial Universities (Japan). These elite networks share a commitment to preserving internal corporate cultures rooted in classical academic values, distinct from fostering an "entrepreneurial" or "innovative" modus operandi among staff and students.

Conversely, within post-Soviet universities, the emphasis on commercial ambition in the corporate agenda diminishes as institutional capabilities grow—specifically, enhanced experimental and technical infrastructure, robust internal scientific information systems, and established research schools. This pattern is observable in institutions like Moscow State University (MSU), Moscow Institute of Physics and Technology (MIPT), Bauman Moscow State Technical University (BMSTU), Tashkent State University of Economics (TSUE - Uzbekistan), Belarusian National Technical University (BNTU - Belarus), and Peoples' Friendship University of Russia (RUDN). These are primarily well-funded state technical universities focused on national defense or technological sovereignty. Consequently, their competitiveness, and that of their graduates, stems not from winning commercial battles but from their unique status as research platforms for state entities.

The trajectory of corporate ethics development in these universities shifts towards achieving world-class research outcomes. This fosters industry-specific values, potentially including greater internal democracy and dedication to advancing their research school, sometimes with minimal formalized ethics beyond the institution's strategic direction. Thus, financial stability correlates strongly with corporate cultures anchored in traditional, "classical" academic community norms.

Similar conclusions are reached by Titova (2015), though focused on regional universities. She identifies specific traits of the regional HEI:

- Close integration with the economic, social, and spiritual life of its specific region.
- Interaction with local civil society, primarily in meeting regional demand for specific professional competencies.
- Influence on the region's overall economic efficiency.
- Reflection of regional cultural (national, religious, secular) characteristics in its management style, ideology, traditions, and internal climate—the very space where its corporate culture forms.

Therefore, across the post-Soviet space, a model linking institutional corporate values to regional economic realities has long been cultivated. This appears driven less by shifts in the technological paradigm and associated cultural-ethical innovations, and more by the HEI's financial capacity, including alumni/student affluence and the market demand for its "product" within these specific contexts.

Petrova (2018), critically assesses the risks posed by the "entrepreneurial" cultural narrative to existing HEI culture and ethics. Framed purely economically, she argues, it conflicts with traditionally classical higher education criteria. Simultaneously, she acknowledges this new "economic" vision of corporate culture responds to challenges posed by contemporary globalizing society.

Offering a contrasting perspective, Dremina et al. (2015), describe a trend towards graduate "adornment" with special competencies. These competencies "adorn" core professional skills, enhancing graduate market competitiveness. The authors thus frame imparting non-traditional ("non-academic") ethical orientations as beneficial.

Examining the mission statements of top-ranked universities (Times Higher Education) reveals a paradoxical misalignment with the concept of entrepreneurial "adornment." These universities remain highly attractive, and their graduates highly sought-after globally.

- Yale University: Focuses on responsible resource stewardship. Mission: "To create, preserve, and disseminate knowledge... [and] educate aspiring leaders worldwide" (No mention of competitive advantage creation).
- University of Cambridge: "To contribute to society through the pursuit of education, learning, and research at the highest international levels" (Focus on knowledge advancement).
- Massachusetts Institute of Technology (MIT): "To advance knowledge and educate students... who will best serve the nation and the world" (Focus on knowledge creation/service).
- Kyoto University: "To sustain and develop its historical commitment to academic freedom... develop human capital" (Focus on freedom/human potential).
- Columbia University: "To advance knowledge and learning at the highest level... for the benefit of humanity" (Focus on knowledge/humanity).
- University of Chicago: "To produce transformative scholarship... [and] cultivate enriching campus life" (Focus on scholarship/enrichment).
- Webster University: "To ensure high-quality learning experiences that transform students for global citizenship and individual excellence" (Focus on learning/citizenship/excellence).
- Peking University: "To achieve educational and academic excellence in the service of society... develop innovators for China and the world" (Focus on excellence/service/innovation).
- Tsinghua University: "To serve the nation and the world with dedication... guided by the motto 'Actions speak louder than words'" (Focus on service/action).

Thus, the missions underpinning the corporate culture of the world's leading universities emphasize humanism and the preservation of scientific tradition. The notion of embedding specific competitive-entrepreneurial elements directly tied to institutional "success" is notably absent. The focus remains on universal or national traditional academic cultural standards. Western graduates are cultivated as human-centered, globally open specialists, bearers of their institution's traditional academic culture. In contrast, many HEIs in former "Socialist Bloc" countries emphasize the graduate's utility for local economic actors and their sectoral competitiveness. This, in turn, shapes a culture of institutional competitiveness as a specialized expert organization and talent pipeline for the regional economy.

Comparing the "competition" vector at two of Russia's oldest Asian universities – Tomsk State University (TSU) and National Research Tomsk Polytechnic University (TPU) – they report TPU experienced reduced funding when attempting to move away from the "entrepreneurial/competitive" component. The authors critically conclude that a classical "hierarchical" culture model, based on discipline, is necessary ("Hierarchy is based on past experience, hence it cannot provide the organizational flexibility required for success under new conditions"). While "new conditions" remain undefined, they note TSU's positive development experience based on integrating "market" indicators.

Complementing this, Kolychev & Budanov (2022), investigated engagement factors among students and faculty at National Research Nuclear University MEPhI (Moscow Engineering Physics Institute) and other top Russian universities. Their parametric analysis identified factors positively correlated with corporate culture: job content; autonomy; interaction; and university digitalization. Conversely, factors like compensation & recognition, infrastructure, career opportunities, and training & development showed the weakest perceived connection to corporate culture, with respondents highlighting deficiencies. This provides further indirect evidence linking the "entrepreneurial" vector in former Socialist Bloc HEIs to shortcomings in career and financial opportunities within these institutions.

Notably, the "entrepreneurial university" concept extends beyond the post-Soviet space to former "Socialist Bloc" countries in Eastern Europe. Dębski et al. (2020), studied four leading publics and four leading private universities in Warsaw. Their findings suggest that state-funded universities, benefiting from stable financing, do not inherently incorporate a "competition" element into their corporate culture. Private institutions, conversely, place greater emphasis on a "competition" culture and resource-seeking. The authors conclude that the "competitive" vector correlates positively with overall success.

It can be asserted that the "entrepreneurial university" model holds relevance not only for the post-Soviet space but also for former "Socialist Bloc" nations. Plausible contributing factors include: the negative impact of economic and political globalization; the diminished authority of the classical university under social globalization; intense resource competition within these economies; and student expectations for high commercial returns on educational investment. However, these assertions require further substantiation and rigorous testing via econometric-statistical modeling.

Empirical testing of the hypothesis linking funding and corporate culture model

Consequently, we formulate the hypothesis of a dual influence of external factors on the corporate value model in higher education:

- (A) Funding: Higher education funding influences the preservation of the "academic" model of corporate values.
- (B) Environmental Innovativeness: Greater environmental innovativeness correlates with more self-sufficient applicants and a higher likelihood of developing the "entrepreneurial" corporate culture model.

This proposed relationship can be tested through econometric models incorporating relevant data from one or several countries.

Specifically, examining the relationship between the volume of private funding for HEIs (dependent variable) and explanatory variables such as population below the subsistence minimum and expenditures on internal development innovations could yield insights interpretable as supporting the "entrepreneurial" corporate culture model under conditions of HE underfunding. If an inverse relationship is found between the dependent variable (private funding) and the population poverty factor, the "entrepreneurial" model, as hypothetically defined, gains support. Simultaneously, a strong positive correlation at the country level between private HEI funding and internal innovation development expenditures would further substantiate the model's validity. Absence of these relationships would refute the hypothesis, necessitating explanation through other institutional factors. Thus, a positive result would confirm part (A) of the hypothesis: the "entrepreneurial" model thrives under resource-seeking pressure, while the "academic" model persists with high levels of science funding and population prosperity.

Alternatively, hypothesis testing can employ a model where the number of private HEIs (serving as prominent representatives of the "entrepreneurial" organizational culture) is the dependent variable. Explanatory variables would include: the number of students enrolled under paid

educational service contracts and the number of advanced production technologies at the country level. Verifying significant relationships within this model could support part (B) of the hypothesis; otherwise, part (A) likely holds.

Empirical Analysis: Russian Federation Case Study

We constructed a multiple regression model based on data for the Russian Federation, extracted from official Rosstat (Russian Federal State Statistics Service) and National Research University Higher School of Economics (HSE) statistical forms (Table 1). Some data points for earlier periods were unavailable; consequently, the table partially includes imputed values. The number of observations satisfies the minimum requirement for observations per factor (exceeding 7 observations per factor included in the model).

Model Quality Assessment:

Rigorous assessment of the constructed model's quality involved the following steps:

1. Significance Testing of Regression Coefficients: Evaluating the statistical significance of each coefficient.
2. Overall Regression Equation Quality: Assessing the model's explanatory power (e.g., via R-squared, F-statistic).
3. Residual Diagnostics:

Testing for heteroscedasticity (non-constant variance of errors).

Testing for autocorrelation (correlation of errors over time/sequence).

4. Normality of Residuals: Testing whether the model residuals follow a normal distribution.

Results and Interpretation:

Table 2 and 3 presents the regression results. Column 1 provides the standardized beta coefficients (β), Column 2 their standard errors (SE β), and Column 3 the unstandardized coefficient estimates (B).

The estimated model takes the form:

$P\_e = 209.5990 - 3.2164 * N\_o\_P + 0.00002 * E\_o\_I$ (Equation 1.1)

Where:

- P_e: Expenditures on higher education from extra-budgetary sources (billion RUB).
- N_o_P: Population with monetary incomes below the poverty line/subsistence minimum (million people).
- E_o_I: Internal current expenditures on scientific research and development by type of cost in the Russian Federation (million RUB).

The p-values associated with the t-statistics for all coefficients in Equation 1.1 are less than 0.05, indicating their statistical significance. The constant (intercept) is also significant.

Interpretation:

Equation 1.1 expresses the dependence of private HE expenditures (P_e) on the size of the impoverished population (N_o_P) and domestic R&D expenditures (E_o_I). The coefficients quantify the impact of each factor on the outcome variable, holding others constant. Crucially, the coefficient for N_o_P is negative, signifying an inverse relationship. This finding provides indirect empirical support for Hypothesis (A). Specifically, higher levels of population poverty correlate with lower private funding inflows (P_e), aligning with the proposition that resource scarcity pressures HEIs towards an "entrepreneurial" model.

Table 1: Regression Results for Hypothesis (A) - Russian Federation Data.

Year	Expenditures on Higher Education from Extrabudgetary Sources, P_e (billion RUB)	Population with Monetary Incomes Below the Poverty Line/Subsistence Minimum, N_o_P (million people)	Internal Current Expenditures on Scientific Research and Development by Cost Type, E_o_I (million RUB)
2000	90,7*	42,3	73873,3
2001	108,5*	40,0	86719,0**

2002	126,3*	35,6	93956,7**
2003	144,1*	29,3	97799,0**
2004	161,9*	25,2	101798,5*
2005	179,6*	25,4	221119,5
2006	218,7	21,6	222489,5*
2007	250,9	18,8	289773,3*
2008	235,4	19,0	357057,1*
2009	287,7	18,4	424341,0*
2010	262,8	17,7	489450,8
2011	286,3	18,2	568386,7
2012	297,8	15,4	655061,7
2013	312,7	15,6	699948,9
2014	320,9	16,3	795407,9
2015	330,1	19,8	854288,0
2016	332,3	19,6	873778,7
2017	342,9	19,2	950257,0
2018	379,0	18,8	960689,4
2019	407,1	18,4	1060589,7
2020	417,5	18,1	1091333,5
2021	480,5	16,4	1193578,5
2022	526,2	13,3	1322563,9
2023	586,5	12,2	1490239,6
Note * Data imputed using linear approximation via the least squares method. ** Data imputed as the proportional mean for the dataset.			

Source: Prepared by authors

The multiple correlation coefficient (Multiple R) for the constructed model is R = 0.983, indicating a very strong relationship between the investigated factors.

Table 2: Regression Summary for Dependent Variable: P_e.

Observations = 23

R= 0,98375505 R2= 0,96777399 Adjusted R2= 0,96470484
F(2,21)=315,32 p<0,00000 Std. Error of Est.: 24,295

	b*	SE b*	b	SE b	t(19)	p- value
Intercept			209,5990	29,17299	7,18469	0,000000
N_o_P	-0,196182	0,057124	-3,2164	0,93656	-3,43430	0,002489
E_o_I	0,831726	0,057124	0,0002	0,00002	14,55995	0,000000

Source: Prepared by authors

Table 3. Key Model Statistics.

Statistic	Value
Multiple R	0,983755045
R^2 (Coefficient of Determination)	0,967773989
Adjusted R^2	0,964704845
Fisher's F (2,21)	315,323754
Model p-value	2,1685464E-16
Standard Error	24,2948097

Source: Prepared by authors

Model Fit Interpretation:

The coefficient of determination (R^2 = 0.968) indicates that 96.8% of the variation in the dependent variable P_e is explained by the independent variables N_o_P and E_o_I. The remaining 3.2% is attributable to unaccounted factors. The calculated Fisher's F-statistic (F = 315.32, p < 0.0001) confirms that the regression model is statistically significant at the 5% level.

Correlation Analysis:

The correlation matrix (Table 4) reveals the strength and direction of linear relationships between variables.

Table 4: Correlation Matrix.

Variable	P_e	N_o_P	E_o_I
P_e	1.000000	-0,801534	0,974512
N_o_P	-0,801534	1.000000	-0,727826
E_o_I	0,974512	-0,727826	1.000000

Source: Prepared by authors

The strongest correlation exists between E_o_I (R&D expenditures) and P_e (private HE funding) (r = 0.975). The correlation between the independent variables N_o_P and E_o_I (r = -0.728) suggests a moderate level of multicollinearity. This warrants caution in interpretation and may indicate the need to exclude one variable to enhance model robustness, highlighting potential ambiguity.

Residual Diagnostics:

1. Autocorrelation (Durbin-Watson Test):

The Durbin-Watson statistic (Table 5) was calculated to detect autocorrelation in the residuals.

Table 5: Durbin-Watson Statistic and Residual Autocorrelation.

Statistic	Value
Durbin-Watson (dW)	0,646183
Residual Autocorr. (r)	0,714947

Source: Prepared by authors

The observed DW statistic (0.646) is compared to critical values for m=2 predictors and n=23 observations at α=0.05 (dL = 1.168, dU = 1.543). Since DW < dL (0.646 < 1.168), we reject the null hypothesis of no autocorrelation. Positive autocorrelation is present. Autocorrelation violates OLS assumptions, potentially leading to inefficient coefficient estimates and inflated test statistics (e.g., R^2, F, t), artificially enhancing the apparent model quality.

2. Heteroscedasticity (White's Test):

White's test was performed by regressing the squared residuals against the independent variables, their squares, and their cross-product:

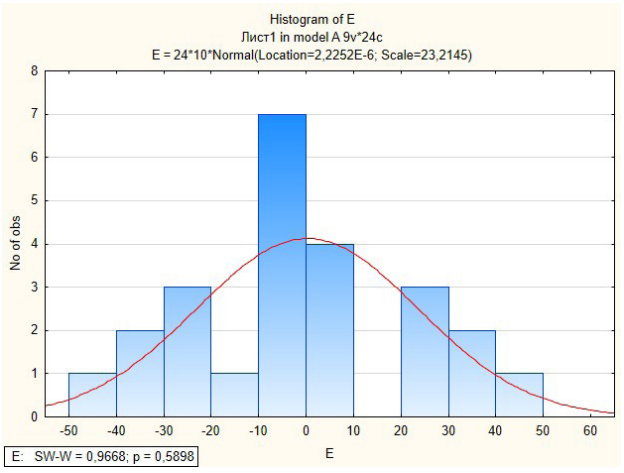
$E^2 = a + b1*E\_o\_I + b11*E\_o\_I^2 + b2*N\_o\_P + b22*N\_o\_P^2 + b12*E\_o\_I*N\_o\_P$ (Auxiliary Eq. 1.2)

The significance of this auxiliary regression (p < 0.05) initially suggested the presence of heteroscedasticity, indicating residual variance depends on the regressors. However, the calculated F-statistic for the auxiliary model (F(2,89)) was less than the critical F-value (F(5,18)) at α=0.05. This renders the conclusion regarding heteroscedasticity ambiguous. A definitive claim of heteroscedasticity cannot be made.

3. Normality of Residuals (Shapiro-Wilk Test):

The normality of residuals was assessed visually (histogram, Figure 2) and formally using the Shapiro-Wilk test (appropriate for n<50).

Fig. 2: Residual Histogram (A) and Shapiro-Wilk Test Result



Source: Prepared by authors

The Shapiro-Wilk test statistic exceeded its critical value at α=0.05. Therefore, we fail to reject the null hypothesis of normally distributed residuals. The residuals conform to the normal distribution, indicating the theoretical error distribution aligns with the empirical data.

Overall Model Assessment and Implications for Hypothesis (A):

Despite demonstrating statistical significance (F-test, significant coefficients) and normally distributed residuals, the model exhibits significant autocorrelation and potential multicollinearity. The ambiguous heteroscedasticity test result adds further caution. While the model describes a substantial portion of the empirical process (P_e = 209.599 - 3.216*N_o_P + 0.00002*E_o_I) and the negative coefficient for N_o_P provides tentative support for Hypothesis (A) (linking higher poverty to lower private funding and pressure towards an "entrepreneurial" model), these diagnostic issues undermine the precision and reliability of the OLS estimates. The presence of autocorrelation, in particular, inflates model fit statistics.

Conclusion: While the modeling exercise offers partial, tentative evidence supporting Hypothesis (A) – suggesting underfunding in Russian higher education perpetuates an "entrepreneurial" corporate culture focused on resource acquisition, potentially driven by persistent poverty levels (N_o_P) and historically moderate R&D expenditure growth (average 3-5% pre-2022, E_o_I) – the identified statistical limitations necessitate employing alternative methodologies to robustly evaluate this hypothesis. The regression results, as presented, cannot be considered fully reliable for definitive causal inference.

Despite aiming for comprehensive analysis, this study has several limitations that warrant consideration when interpreting its results.

Empirical Testing of Hypothesis (A): The empirical validation of Hypothesis (A), concerning the funding-corporate culture model link, relied primarily on regression analysis of Russian Federation data. It should be noted that data for earlier periods (2000-2004 for P_e and several years for E_o_I) were imputed using approximation methods due to incomplete official statistical time series. This imputation could affect the precision of the estimates. Furthermore, the constructed model exhibited signs of residual autocorrelation and a strong correlation between private HEI funding (P_e) and R&D expenditures (E_o_I), necessitating caution in interpreting the individual contribution of these factors. Crucially, the model explores the relationship between macroeconomic indicators and financial flows into the higher education system, serving as an indirect proxy for influence on HEI corporate culture, rather than a direct measure.

Testing Hypothesis (B): The validation of Hypothesis (B), regarding the role of environmental innovativeness and applicant self-sufficiency in fostering the "entrepreneurial" model, was predominantly based on qualitative case analysis (e.g., VSUES, TSU/TPU, private Polish universities) and synthesis of secondary research. The absence of a dedicated formal econometric model limits the capacity for quantitative assessment of this aspect of the hypothesis.

Geographical Focus: The study's focus on Russian HEIs, and to a lesser extent those in the post-Soviet space and Eastern Europe, enabled the identification of significant regional patterns. However, this scope limits the direct generalizability of the findings to the global context or countries with fundamentally different higher education systems.

These limitations highlight productive avenues for future research, including: collecting original data at the institutional level; employing methods robust to autocorrelation (e.g., time-series analysis, GMM); directly measuring corporate culture type through surveys; and incorporating a broader international comparative perspective. Nevertheless, despite these constraints, the combination of methods employed provided a comprehensive view of the research problem and revealed significant trends in the transformation of university corporate culture under external pressures.

CONCLUSIONS

This study confirms the dualistic nature of corporate culture in modern universities, manifested in the coexistence and competition of "academic" and "entrepreneurial" models.

The "Academic" Model: Rooted in historical traditions of university autonomy, scientific fundamentality, and humanistic ideals, this model dominates leading Western universities (e.g., Ivy League, Oxbridge, C9 League). This dominance is facilitated by their substantial funding and endowments. The missions of these institutions emphasize the creation, preservation, and dissemination of knowledge, personal development, and service to society, rather than commercial competitiveness as an end in itself.

The "Entrepreneurial" Model: Characterized by a focus on market success, economic efficiency, developing specific business competencies in students, and close integration with regional economic actors, this model is prevalent in HEIs across the post-Soviet space and former Socialist Bloc (e.g., VSUES, KubSU, private Polish universities). Empirical analysis, including the constructed regression model for Russia, revealed a significant inverse relationship between population poverty levels and private HEI funding (P_e). This finding provides indirect support for Hypothesis (A): insufficient public funding for higher education and challenging socio-economic conditions act as key drivers for the development of the "entrepreneurial" model as a survival strategy and resource-seeking mechanism. This model emerges primarily as a response to underfunding challenges, rather than solely as a

consequence of technological transformation or globalization trends.

Role of Funding and Status: The research also demonstrates that high levels of state funding and national scientific-technological hub status (exemplified by MSU, MIPT, BMSTU) foster the preservation of "academic" cultural elements even within the post-Soviet context. These institutions focus on achieving unique scientific results and fundamental research, rather than the commercial competitiveness of graduates.

Hypothesis (B): Support for Hypothesis (B), positing a direct link between environmental innovativeness, applicant self-sufficiency, and the "entrepreneurial" model, was primarily qualitative rather than strictly quantitative. Nevertheless, case studies (VSUES, TPU) and data on private Polish HEIs suggest its plausibility within resource-constrained environments.

Consequently, the primary factor determining the dominant corporate culture type in the studied region is the level and stability of institutional funding, mediated by the macroeconomic context (poverty levels, R&D investment). The "entrepreneurial" model functions as an adaptive mechanism for HEIs operating under resource constraints. In contrast, the "academic" model persists where significant state or endowment support exists. This dynamic, shaped by historical legacies and economic development specifics, distinguishes post-socialist HEIs from classical Western universities, where financial stability more readily enables the cultivation of traditional academic values.

These findings underscore the necessity for university leadership to consciously select a corporate culture model aligned with their resource capabilities and strategic goals, balancing global trends against local socio-economic realities. Further verification of the hypotheses and deeper exploration of the identified patterns require research utilizing more granular institutional-level data and robust methodological approaches addressing the limitations noted.

REFERENCES

Abdalina, L. V., Koval, N. A., & Plaksina, N. I. (2020). Development of corporate culture of a university teacher: From theory to practice. ***Perspectives of Science and Education,*** ***3***(45), 475–487. https://pnojournal.wordpress.com/wp-content/uploads/2020/07/pdf_200334.pdf

Aleinik, V. E. & Rasskazova, O. A. (2022). Corporate culture as a factor in enhancing organizational effectiveness. ***Proceedings of the International Scientific and Practical Conference V Rimashevskaya Readings.*** Moscow, Russian.

Alvarado, R., Deng, Q., Tillaguango, B., Méndez, P., Bravo, D., Chamba, J., Alvarado-Lopez, M., & Ahmad, M. (2021). Do economic development and human capital decrease non-renewable energy consumption? Evidence for OECD countries. ***Energy, 215***(Part B), 119147. https://doi.org/10.1016/j.energy.2020.119147

Barber, M., Donnelly, K., & Rizvi, S. (2013). ***An avalanche is coming: Higher education and the revolution ahead***. IPPR. http://www.insidehighered.com/sites/default/server_files/files/FINAL%20Embargoed%20Avalanche%20Paper%20130306%20(1).pdf

Bataka, H. (2021). Globalization and environmental pollution in Sub-Saharan Africa. ***African Journal of Economic Review, 9***(1), 191–205. https://www.ajol.info/index.php/ajer/article/view/201943

Bilgili, F., Ulucak, R., Koçak, E., & İlkay, S. Ç. (2020). Does globalization matter for environmental sustainability? Empirical investigation for Turkey by Markov regime switching models. ***Environmental science and pollution research international***, ***27***(1), 1087–1100. https://doi.org/10.1007/s11356-019-06996-w

Braga da Cruz, M. (2006). Contemporary challenges to European university culture. ***Higher Education in Europe, 31***(4), 399–401. https://unesdoc.unesco.org/ark:/48223/pf0000151123

Dębski, M., Cieciora, M., Pietrzak, P., & Bołkunow, W. (2020). Organizational culture in public and non-public higher education institutions in Poland: A study based on Cameron and Quinn's model. ***Human Systems Management, 39***(3), 345–355. http://dx.doi.org/10.3233/HSM-190831

Dremina, M. A., Gorbunova, G. A., & Kopnov, V. A. (2015). The influence of university corporate culture on the adaptation of graduates' competencies. ***Education and Science, 5***(124), 39–57. https://research.amanote.com/publication/da3IAnQBKQvf0Bhiadnw/influence-of-university-corporate-culture-on-adornation-of-graduates-competences

Kapitonov, E. A., Zinchenko, G. P., & Kapitonov, A. E. (2005). ***Corporate culture: Theory and practice***. Alfa.

Kolychev, V. D. & Budanov, N. A. (2022). Student and faculty engagement as an indicator for assessing corporate culture. ***Higher Education in Russia, 31***(2), 42–57. https://pdfs.semanticscholar.org/b426/60bc21703ac3e6f6cf2a505f389cbffe5e4c.pdf

Kotter, J. P. (2011). ***Corporate culture and performance***. Free Press.

Melnik, D. V. & Yunov, S. V. (2023). Formation of university students' corporate culture through corporate literature. ***Innovative Development of Professional Education, 4***(40), 33–39. https://chirpo.ru/files/novosti_izdatel/2024/%D0%96%D1%83%D1%80%D0%BD%D0%B0%D0%BB%2040_2023.pdf

Petrova, G. I. (2018). The modern university as a corporation: The new role of traditional corporatism. ***University Management: Practice and Analysis, 22***(2), 25–33. https://ideas.repec.org/a/adf/journl/yid346.html

Plaksina, N. I. (2023). University teacher's corporate culture: Development experience. *Gaudemus, 22*(3), 100–106. https://doi.org/10.20310/1810-231X-2023-22-3-100-106

Rüttinger, R. (1986). Unternehmenskultur: Erfolge durch Vision und Wandel. Econ-Verlag.

Titova, E. Y. (2015). Corporate culture of a regional university: Defining the concept. Proceedings of Saratov University. *Sociology. Politology, 15*(4), 33–36. https://doi.org/10.18500/1818-9601-2015-15-4-33-36