

Пермский филиал федерального государственного автономного образовательного учреждения высшего образования "Национальный исследовательский университет "Высшая школа экономики"

**Программа учебной дисциплины
«Управление нематериальными ресурсами» / «Managing intangibles»**

Утверждена

Академическим советом основных образовательных программ по направлениям подготовки 38.03.01 Экономика, 38.04.08 Финансы и кредит

Протокол № 8.2.2.1-32-09/04 от 30 августа 2019

Академический руководитель ОП Финансы

_____ Завертяева М.А.

Подпись

ФИО

Разработчик	Молодчик М.А., доцент, департамент экономики и финансов
Число кредитов	4
Контактная работа (час.)	48 часов
Самостоятельная работа (час.)	104 часа
Образовательная программа, курс	Финансы, 1 курс
Формат изучения дисциплины	без использования онлайн курса

Syllabus

Managing Intangibles

(4 ECTS)

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Academic council of basic educational programs 38.03.01 Economics, 38.04.08 Finance and credit Meeting Minute # 8.2.2.1-32-09/04 dated 30 August 2019

1. Course Description

a). Pre-requisites

Undergraduate course Management, Economics.

b). Abstract

Course “Managing Intangibles” presents theories such as resource-based view, value-based management and human resource concept, which allow at understanding the role of intangibles in company long-term success and competitiveness. In the framework of the course students get an opportunity to measure intangible resource, to understand their impact on company performance. Special focus is pointed to human resources as a core driver of company’s value. During the course students develop their analytical skills as well as presentation skills. Econometrics is used for estimation of “intangible-performance” link.

2. Learning Objectives

The aim of the course is to provide students with the new knowledge about intangible resources as core competitive advantages of a company; to learn how to measure intangibles; to develop analytical thinking when doing investments in intangible resources; to apply econometrics for better understanding performance effect of intangibles.

3. Learning Outcomes

After the course the students should be able to:

- Identify intangible resources of a company and describe their specific features;
- To measure intangible resource;
- To estimate performance effect of intangible resources using different econometric techniques;
- To reveal supporting and obstructing factors for transformation of intangibles into company performance;
- To make investment decisions with regard to human resource.

Upon successful completion of the course, the students should have the following competences: УК-5 (СМ-М5), УК-8 (СМ-М8), ОПК-1, ОПК-2, ОПК-3, ПК-1 (ИК-М.1.2.и_1.2.н_1.1.и_1.1.н_НИД_5.4), ПК-2 (ИК-М 3.2НИД_5.4), ПК-3 (ИК-М.1.2.э; ИК-М.3.2: ИК-М.4.2)

4. Course Plan (48 hours)

4.1 Intangible resources: identification and measurement (16 hours)

4.1.1 What are the sources of competitive advantages of a company?

TRIPOD model: resource-based view, industrial-based view, institutional-based view. Specific features of competitive resource: valuable, rare, inimitable, non-transferable (VRIN). Competitive advantages through the lens of digital economy.

4.1.2 What are intangible resources?

Intellectual Capital Concept. Specific features of intangibles: non additive, multiply rule. Challenges by managing intangibles. IC Model for particular company (Lego game). Example of assignment is presented in Appendix 1.

4.1.3 How to measure intangibles?

Measurement approaches: metrics, survey, valuation. European and Danish guidelines for management intangibles. Tobin's Q, Economic Value Added, Market Value Added. Aggregation methods: principal component analysis, structural equation modeling. Index of intangible resources: analytics for companies. Example of assignment is presented in Appendix 1.

4.1.4 Does it make sense to disclose intangibles? Voluntary and non-voluntary disclosure. Non-financial reporting. Corporate Social Responsibility.

4.1.5 Valuation of intangibles. Patent valuation, brand and trade mark valuation, license valuation.

4.1.6 Analytical project for a particular company. Roadmap. Assignment is presented in Appendix 2.

4.2 Intangible-driven value creation (16 hours)

4.2.1 Value-based management. EVA vs. MVA. Framework for value creation analysis: investigated and control variables.

4.2.2 Investments in intangibles: the more the better? Endogenous value creation. Web analytics and performance. Index of intangibles and performance. Application econometric techniques for estimations: OLS, SEM, panel data. Managerial implications.

4.2.3 In quest for better intangible resource configuration. Econometric tools: SEM, smart-PLS. Managerial implications.

4.2.4 Supporting and obstructing factors for intangible-driven value creation.

Company size. Multilevel perspective of intangible-based performance (company, industry, region, country). Age, Ownership. Financial leverage. Econometric tools: interaction effects, HLM. Managerial and policy implications.

4.2.5 Strategies with regard to different intangibles. Web strategies of global companies: authority vs visibility. Companies' profiles with regard to intangibles (cluster analysis). Performance effect of strategic behavior.

4.2.6 Elaboration of own research project. Presentation. Assignment is presented in Appendix 3.

4.3 Human capital – core resources of a company (16 hours)

4.3.1 Introduction to HRM concepts.

4.3.2 HRM simulation. Making decisions about staffing, wages, trainings, benefits, HR programs. Impact of HR decisions on company outcome. Company competition on the labor market.

4.3.3 Presentation of results. Analysis of goal achievements. Assignment is presented in Appendix 5.

5 Reading List

c) Required

Books (are available online NRU HSE):

1. Argote L. 2012. Organizational Learning and Knowledge Management, [The Oxford Handbook of Organizational Psychology, Volume 2](#), Edited by S.W.J. Kozlowski, Access online (NRU HSE): <https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199928286.001.0001/oxfordhb-9780199928286>.
2. Lev, B. 2001. Intangibles: Management, Measurement and Reporting, Brookings Institution Press. ProQuest Ebook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=3004312>.
3. Lev, B., and F. Gu. 2016. The End of Accounting and the Path Forward for Investors and Managers, John Wiley & Sons, Incorporated, ProQuest Ebook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=4538258>

d) Optional

Recommended articles (are available online NRU HSE):

1. Barney, J. B. 1999. “Firm resources and sustained competitive advantage”, *Journal of Management*, Vol. 17, pp. 99–120.
2. Dumay, J. 2016. A critical reflection on the future of intellectual capital: from reporting to disclosure. *Journal of Intellectual Capital*, 17(1): 168–184.
3. Jardón C., Molodchik M., Paklina S. 2018. Strategic behaviour of Russian companies with regard to intangibles. *Management Decision*. 56(11): 2373-2390.
4. Inkinen, H. 2015. Review of empirical research on intellectual capital and firm performance. *Journal of Intellectual Capital*, 16(3): 518–565.
5. Kristandl, G. and Bontis, N. 2007. “Constructing a definition for intangibles using resourced based view of the firm”, *Management Decision*, Vol. 45 No. 9, pp. 1510–1524.
6. Molodchik M., Paklina S., Parshakov P. 2018. Digital relational capital of a company. *Meditari Accountancy Research*. 26(3): 443-462.
7. Molodchik, M., Shakina, E., & Barajas, A. 2014. Metrics for the elements of intellectual capital in an economy driven by knowledge. *Journal of Intellectual Capital*, 15(2):206–226.
8. Shakina E. A., Barajas A., Molodchik M. 2017. Bridging the gap in competitiveness of Russian companies with intangible bricks. *Measuring Business Excellence*. 21(1): 86-100.
9. Shakina E. A., Molodchik M., Barajas A. 2017. Endogenous Value Creation: Managerial Decisions on Intangibles. *Management Research Review*. 40(4): 410-428.
10. Su, Z., Peng, M. W., & Xie, E. 2016. A Strategy Tripod Perspective on Knowledge Creation Capability: Strategy Tripod Perspective on Knowledge Creation Capability. *British Journal of Management*, 27(1): 58–76.

6. Grading System

The course result grade is based on four marks, which are summarized with correspondent weight:

$$O_{\text{result}} = 0.3 \cdot O_{\text{project work}} + 0.3 \cdot O_{\text{research case}} + 0.1 \cdot O_{\text{selfwork}} + 0.3 \cdot O_{\text{exam}}.$$

Where

$O_{\text{project work}}$ – the mark for Project work “Measurement of company IC” (see in detail Appendix 2);

$O_{\text{research case}}$ – the mark for Research case (see in detail Appendix 3);

O_{self} reflects the grade of the assignment presented in Appendix 4;

O_{exam} – the mark for presentation and analytical report after HRM simulation (see in detail Appendix 5).

7. Examination Type

For each class there is the assignment (reading, presentation, project work, case, etc.) For each assignment the students get clear instructions and the list of requirements. The students which are absent during the class get individual task. Each of three topics of the course is finalized with student group project which includes written part, oral presentation and individual questions. Such approach allows developing universal, specific and professional competencies in the field of Managing intangibles. Short quizzes are provided in Kahoot.it. All course materials are accessible in Learning Management System (LMS). The communication with the Professor is supported by LMS as well. For each assignment students can get a mark scaled in 10 points.

8. Methods of Instruction

The course format is based on interactive teaching style with intensive student participation. It combines lectures, class discussions, analysis of cases, readings, discussion of academic papers. Video presentations of well-known experts on intangibles are included in traditional lectures (for example in ted format). The students are invited to participate in the scientific workshops of International Laboratory of Intangible-driven Economy (IDLAB, <https://idlab.hse.ru/en/>). For each of three topics of the course the author employs the integrated approach presenting theoretical background, best practices, and recent empirical studies. Moreover, in the framework of each three topics of the course there is a group student project which motivates students to collaborate with each other, to study theory in practice and to develop presentation skills. The first project “Intellectual capital of a company: role, measurement, management” focuses on developing measuring skills for effective IC management. The students get opportunity to justify their decisions from economic and financial point of view. The second project “Research case” allows the students to improve analytical skills using unique databases of IDLAB and replicating the estimations from published papers in peer-reviewed scientific journals. The students have the chance to get knowledge about recent studies as well as seminal papers in investigated field; and to undertake their own research. The third project is based on computer simulation of managerial decisions in the field of human resources. The students obtain the opportunity to experience dynamic environment and rival pressure in labor market; to reveal employee reaction to human resource practices.

9 Special Equipment and Software Support

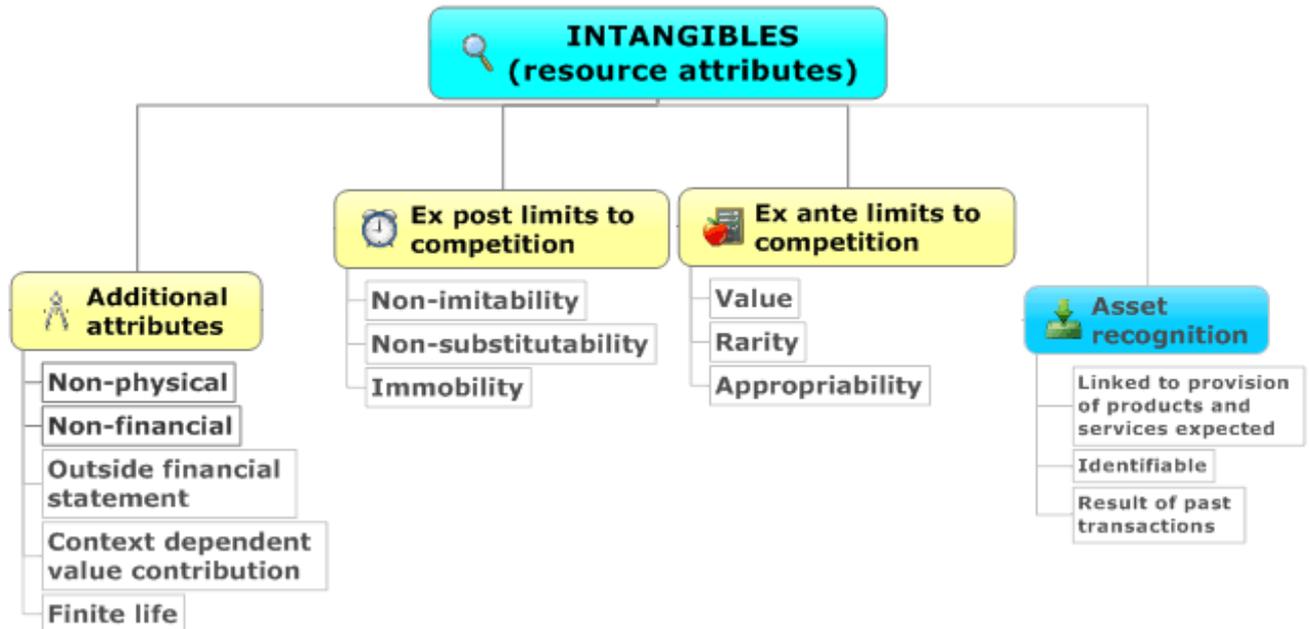
Special Equipment and Software Support are not required.

Appendix 1.

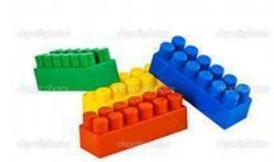
Assignment for the class “Intangible Definition”

Article: Kristandl, G. and Bontis, N. 2007. “Constructing a definition for intangibles using resource based view of the firm”, *Management Decision*, Vol. 45 No. 9, pp. 1510–1524.

Using the resource attributes presented on the picture below, provide an example of each attribute for particular intangible resource (or prove that some attributes are not expressed in this resource).



Assignment for the class “IC Model”



Design an intellectual capital model for particular company.

- Choose any company you want.
- Following the instructions build the IC Model.
- Prepare the short presentation (3-5 minutes).

Step 1: What value does your company create for the customers? How does the company get paid?

Step 2: What competencies (human capital) support this value creation?

Next, think about the collective knowledge that supports your revenue generation. What does the company know how to do? There are probably a handful of core competencies shared by the employees that enable the organization to create value for your customers. List your unique core competencies.

Step 3: What processes and/or captured knowledge (structural capital) support this value creation?

Now, think about the processes that support the revenue generation. Processes may range from software-enabled solutions to standardized procedures or customary work patterns. At this point, please just model processes related to customer value creation. Support processes such as finance, human resources and marketing can be added later. List your core value creation processes below:

Step 4: What relationships (relationship capital) are integral to this value creation?

Then, think about the relationships that help you create and deliver value. Every business has customers of some kind—the group that your organization is designed to serve. There may also be partners and/or suppliers. Remember that, while they create value, not all relationships involve the exchange of money; a great example of this is Google’s relationship with internet searchers—they do not pay for the service but their searches are the core of Google’s value proposition. List your core relationship types below:

Step 5: How does it all fit together?

Now, take your pieces and fit them together to create a Intellectual capital model. There are a couple ways to approach this:

From the bottom up: Start with competencies (as in the Google video). Build the model from there, attaching processes to related competencies then adding relationships and then revenue.

From the top down: Start with your revenue (yellow) blocks. Link the competencies, processes and relationships together in a way that illustrates how work gets done.

Assignment for the class “How to measure intangibles?”

Prepare the presentation about one of IC measurement method. The presentation should provide knowledge about method, its advantages and disadvantages, example of application. You can choose among the following methods:

- European guidelines
- Danish guidelines
- Calculated Intangible Value and Economic Value Added
- Tobin’s Q and Market Value Added

Requirements:

1. Slides should be send to Professor one day before the presentation
2. Presentation should take 12-15 minutes
3. Short quiz for the classmates should be prepared and run after the presentation

Recommended links:

1. https://www.researchgate.net/profile/Jose_Guimon/publication/46563463_MERITUM_and_Danish_Guidelines_for_Reporting_on_Intangibles_A_Comparative_Study/links/55e42e9b08aede0b5733e4b0/MERITUM-and-Danish-Guidelines-for-Reporting-on-Intangibles-A-Comparative-Study.pdf
2. <http://www.incas-europe.org/home/index.html>
3. <https://www.investopedia.com/terms/c/civ.asp>
4. <https://www.investopedia.com/terms/e/eva.asp>
5. <https://www.investopedia.com/terms/q/qratio.asp>
6. <https://www.investopedia.com/terms/m/mva.asp>

Appendix 2.

Assignment for company project

Title “Intellectual capital of company XXX: role, measurement, management”

In your paper the following issues should be presented:

1. The role of intellectual resources for chosen company
2. Definition of intellectual capital (resources)
3. Short description of measurement approach (European guidelines or Danish guidelines, other methods should be agreed with the professor)
4. Application of chosen measurement approach
5. Conclusions

Reference list.

Requirements:

1. Less than 15 pages, 12 pt, 1,5 space.
2. Graphics, tables should be readable and clear.
3. All figures, definitions should have citation.
4. Electronic form due to _____ 24.00 (for each day minus 1 point).
5. Not more than 6 members in a group.
6. Oral defense

Recommended literature

1. Kristandl, G. and Bontis, N. 2007. “Constructing a definition for intangibles using resourced based view of the firm”, *Management Decision*, Vol. 45 No. 9, pp. 1510–1524.
2. Lev, B. 2001. *Intangibles: Management, Measurement and Reporting*, Brookings Institution Press. ProQuest Ebook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=3004312>.
3. Marr, B. 2004. “Measuring and Benchmarking Intellectual Capital”. *Journal of Intellectual Capital*, 11(6), 559-570

Appendix 3. Research cases

Research case 1. Intangibles and company performance

The world economy is constantly changing, creating and complicating its conditions. The processes of globalization, urbanization and increasing labor mobility have resulted in a significant number of economic challenges, which are impossible to overcome using conventional means. This is why intellectual resources have increased in importance in recent years (McCarthy et al., 2014). The most relevant definition of intangibles is one offered by Kristandl and Bontis (2007), in which they are defined as “strategic firm resources that enable an organization to create sustainable value, but are not available to a large number of firms. They lead to potential benefits which cannot be taken by others and are not imitable by competitors or substitutable using other resources”. Figure 1 presents a framework for empirical analysis with regard to intangible-driven performance of a company.

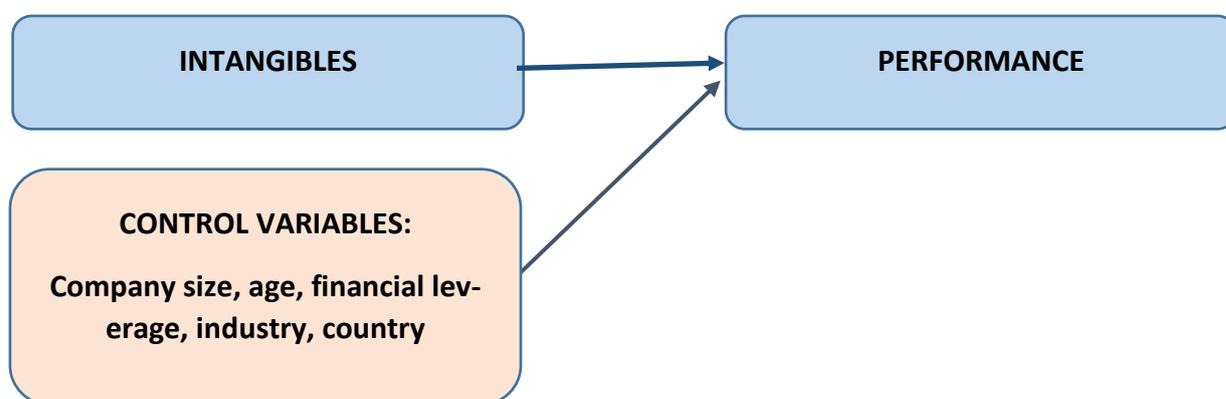


Figure 1. Framework for empirical analysis

Unfortunately, intangibles appear to be undeveloped in Russian companies. For example, the study by Shakina et al. (2017) provides empirical evidence of a tremendous gap in the endowment of intellectual resources among Russian companies, compared with the benchmark set by European competitors. Meanwhile, Andreeva and Garanina (2016) claim that the employment of intangible resources plays a crucial role within Russian companies by creating value added and future opportunities.

You have a unique opportunity to investigate the endowment of Russian companies with regard to intangibles and estimate their impact on company performance. Table 1 presents indicators which are in your disposal and table 2 specifies industries presented in the database.

Reference:

1. M. Molodchik E. Shakina A. Bykova, (2012), "Intellectual capital transformation evaluating model", *Journal of Intellectual Capital*, Vol. 13 Iss 4 pp. 444 – 461 <http://dx.doi.org/10.1108/14691931211276089>
2. C. F. Jardón, M. Molodchik, S. Paklina, (2018) "Strategic behaviour of Russian companies with regard to intangibles", *Management Decision*, <https://doi.org/10.1108/MD-04-2017-0399>
3. Shakina, E., Barajas, A. and Molodchik, M. (2017), “Bridging the gap in competitiveness of Russian companies with intangible bricks”, *Measuring Business Excellence*, Vol. 21 No. 1.

Case assignment

1. Justify, why intangible-driven performance is interesting phenomenon to study.
2. Put forward hypotheses about impact of intangible resources on company performance (positive, negative, non-significant, linear, non-linear).
3. Choose particular indicators for intangible resources using the database which is in your disposal. You can also choose a particular perspective: human resources, structural capital, relational capital and build further analysis only for one perspective.
4. Provide analysis for chosen indicators considering descriptive statistics (min, max, mean, median). What companies are outliers/leaders? Is it unexpected? Make conclusions about sample heterogeneity, consider industry division as well. Optionally you can do this in dynamic (2004-2014).
- 4.a optionally you can provide principal component analysis and construct indicators for human capital, structural capital and relational capital.
- 4.b optionally you can provide cluster analysis and reveal similar patterns in company behavior with regard to intangibles.
5. Choose particular indicators for company performance.
6. Provide analysis for chosen performance indicators considering descriptive statistics (min, max, mean, median). What companies are outliers/leaders? Is it unexpected? Make conclusions about sample heterogeneity, consider industry division as well.
7. Estimate the link “intangibles – company performance” using correlation analysis.
8. Provide regression analysis for the impact of intangibles on company performance (don't forget about control variables).
9. Conclude you research case.

Research case 2. Impact of web analytics on company performance

Nowadays web-driven relationships of a company got crucial role for value creation, because the internet has become an extremely competitive marketplace and digitalization affects the way of business doing via an augmentation of communication process and connectivity tools. Company face in digital space becomes recent phenomenon which attracts scholars' and practitioners' attention. Thus, paper by Molodchik et al., (2018) revealed the evidence that digital relational capital matters for company added sales; and Wang and Xu, (2017) found out that company web visibility drives its performance. From technical point of view, visibility of website can be defined as "the ease and effectiveness with which a search engine crawler can find and index a webpage (Weideman, 2009). At the same time there is one more essential aspect about company digital face to consider. It is about how company digital face is trustworthy or, in other words, the level of its authority in the Internet. Actual and potential customers and partners can decide whether to deal with a company particularly taking into account the quality of company website content, its internal and external links, the freshness and update frequency of information, etc. Some of the indicators that can reflect visibility and authority are presented in Table 1. They can be easily found using SEO agency - cy-pr.com.

Table 1. Examples of metrics for web analytics

Metric	Provided by	Definition	Values
Citation flow	Majestic	Rank based on the number of references to a website from other sites	0–100
Trust flow	Majestic	Rank based on the number of references to a website from trusted sites	0–100
MozRank	Moz	Rank based on the number of references to a website from other sites and their positions in MozRank	0–10
Page authority	Moz	Rank based on how well a webpage will rank on search engine result pages	0–100
Domain authority	Moz	Rank based on how well a website will rank on search engine result pages	0–100
Web of trust	WOT Services	Rank based on the trustworthiness of a webpage relative to all other pages on the web	1-5
Indexed pages by Bing	Bing	Number of pages of the website that can be found using Bing	No limit
Indexed pages by Google	Google	Number of pages of the website that can be found using Google	No limit
Alexa Rank	Alexa	Combination of the estimated average daily unique visitors to the site and the estimated number of page views on the site over the past three months	No limit

It is curious to discover, if these metrics are different for different companies and how dramatic this difference is. Moreover, the link between web analytics and company performance is also not a trivial question, because there are many other factors that have an influence to company financial outcome. Figure 1 presents a framework for empirical analysis with regard to web-driven performance of a company.

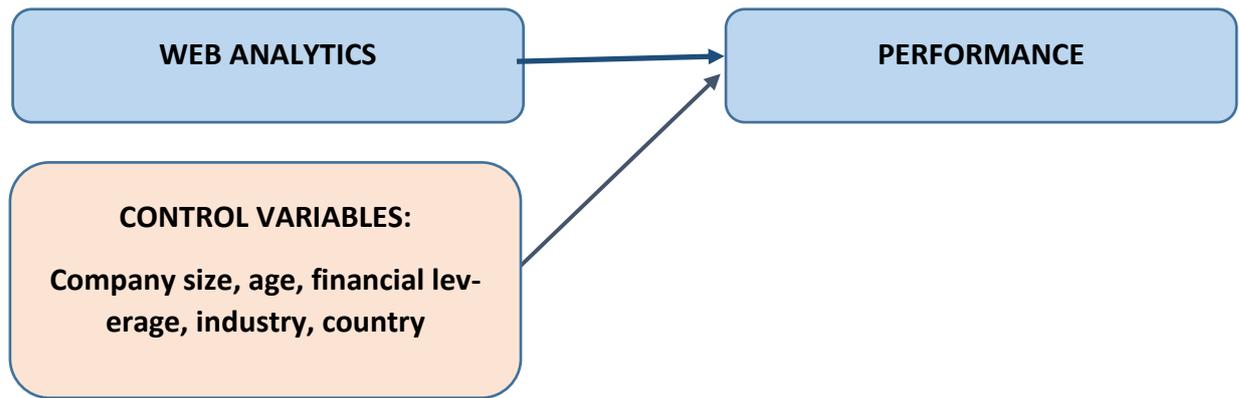


Figure 1. Framework for empirical analysis

Reference:

1. Mariia Molodchik, Sofiia Paklina, Petr Parshakov, (2018) "Digital relational capital of a company", *Meditari Accountancy Research*, Vol. 26 Issue: 3, pp.443-462. <https://doi.org/10.1108/MEDAR-08-2017-0186>
2. Wang F., Xu B. (2017) Who needs to be more visible online? The value implications of web visibility and firm heterogeneity, *Information & Management*, Vol. 54, pp. 506-515
3. Weideman, M. (2009), *Website Visibility: The Theory and Practice of Improving Rankings*, Elsevier.

Case assignment

1. Justify, why web-driven performance is interesting phenomenon to study.
2. Put forward hypotheses about impact of web analytics on company performance (positive, negative, non-significant, linear, non-linear).
3. Choose particular indicators from web analytics using the database which is in your disposal.
4. Provide analysis for chosen indicators considering descriptive statistics (min, max, mean, median). What companies are outliers/leaders? Is it unexpected? Make conclusions about sample heterogeneity, consider industry division as well.
 - 4.a optionally you can choose indicators for web-visibility and web-authority; and analyze how companies are dealing with these two perspectives of web-analytics.
5. Choose particular indicators for performance.
6. Provide analysis for chosen performance indicators considering descriptive statistics (min, max, mean, median). What companies are outliers/leaders? Is it unexpected? Make conclusions about sample heterogeneity, consider industry division as well.
7. Estimate the link "web-analytics – company performance" using correlation analysis.
8. Provide regression analysis for the impact of web-analytics on company performance (don't forget about control variables).
9. Conclude you research case.

Appendix 4.

Assignment for selfwork

Choose one article and made graphical abstract using infographics.

1. Jardón C., Molodchik M., Paklina S. 2018. Strategic behaviour of Russian companies with regard to intangibles. *Management Decision*. 56(11): 2373-2390.
2. Inkinen, H. 2015. Review of empirical research on intellectual capital and firm performance. *Journal of Intellectual Capital*, 16(3): 518–565.
3. Molodchik M., Paklina S., Parshakov P. 2018. Digital relational capital of a company. *Meditari Accountancy Research*. 26(3): 443-462.
4. Molodchik, M., Shakina, E., & Barajas, A. 2014. Metrics for the elements of intellectual capital in an economy driven by knowledge. *Journal of Intellectual Capital*, 15(2):206–226.
5. Shakina E. A., Barajas A., Molodchik M. 2017. Bridging the gap in competitiveness of Russian companies with intangible bricks. *Measuring Business Excellence*. 21(1): 86-100.
6. Shakina E. A., Molodchik M., Barajas A. 2017. Endogenous Value Creation: Managerial Decisions on Intangibles. *Management Research Review*. 40(4): 410-428

Appendix 5.

Human Resource Management Simulation

HRMANAGEMENT is a simulation (<https://schools.interpretive.com>) that allows students to manage the human resources department of a medium-sized organization. The type of organization is not industry specific and could be for-profit or non-profit, in either a manufacturing or service industry. The simulation gives the opportunity to apply human resources concepts in an environment that encourages experimentation. As a member of a human resources management team, students make quarterly decisions about staffing, compensation, training, and employee relations for a firm. In making decisions, students need to allocate resources limited by an annual budget. They will be competing against firms run by other teams in the class, each starting with the same number of employees and with the same budget. The final goal is to improve the performance of the organization based on measures such as employee turnover, morale, and productivity. By making decisions that are better than competitors', particular team will get better results at a lower cost than other firms in the industry.

Report and presentation after HRM simulation:

1. What goal(s) did you put before you start to make the decisions? (measurable goal with regard to simulation context)
2. What did you do in order to achieve these goals? (considering staffing, compensation, training, and program decisions)

For example, you can explain your position according to labor cost per unit.

