

THE IMPACT OF CORPORATE VALUES AND FACTORS OF INTERNAL AND EXTERNAL CULTURE ON FORMULATING THE POST-COVID “NEW NORMAL”: IMPLICATIONS FOR CYBERSECURITY AND INFORMATION SYSTEMS*

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Abstract

This paper investigates whether and to what extent corporate values as well as factors of external culture impact on the companies’ ability and commitment to formulate effective and realistic “new normal” post-COVID strategies with particular focus on cybersecurity and information systems priorities. Using COVID-19 response documents from top 100 companies featured on the Forbes Fortune 500 global as well as US lists, we employ topic modelling to map top priority themes in the COVID responses mentioned by the companies and explore whether and how these priority themes together with factors of external culture (Schwartz cultural value orientation, Global Cybersecurity Index) influence business financial success and resilience at times of uncertainty. We find that while cybersecurity and network security are rarely a subject of corporate focus, reaching a successful new normal requires businesses to concentrate on management of risks, risk and uncertainty aversion, as well as on tackling (digital) fraud. Implications of these findings for theory and practice are discussed.

Keywords: COVID-19, new normal, cybersecurity, information systems, culture

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The Impact of Corporate Values and Factors of Internal and External Culture on Formulating the Post-COVID “New Normal”: Implication for Cybersecurity and Information Systems

1. Introduction

For almost a year, our planet has been living in conditions of the global pandemic. This pandemic, caused by the 2019 coronavirus disease (i.e., COVID-19), affected all facets of human life, including the day-to-day functioning of businesses around the globe. While it is hard to fully appreciate the economic impact of COVID-19, it is evident that most nation-state economies have already shrank, showing high spikes in unemployment rates. With over 33.6 million people infected and more than 1.01 million dead as of the end of September, 2020; it is clear that the global community is fighting one of the largest threats to health, wellbeing, and economic development in the human history.¹ Naturally, an important question concerns the longer-term far-reaching effects of the pandemic on business and society. The purpose of this paper is to formulate and test a new approach to understanding and mapping the future, so-called “new normal”, strategic priorities for businesses around the globe with particular emphasis on cybersecurity and information systems using corporate values as well as factors of internal and external business culture.

COVID-19 is a disease caused by a new form of coronavirus, distinct from existing coronaviruses such as the Middle East Respiratory Syndrome (MERS) and the Severe Acute Respiratory Syndrome (SARS). First reported at the end of 2019 in Wuhan City, China, the virus quickly spread across the planet (e.g., Zu et al., 2020). The virus is particularly dangerous for elderly people as well as people with certain health predispositions (such as high blood pressure, obesity, diabetes, etc.). Despite the fact that many efforts have been devoted to the development of the vaccine against the disease, the virus continues spreading and many countries around the globe are talking about the second wave of the pandemic. Furthermore, much remains unknown about the characteristics of COVID-19. It is also uncertain whether and to what extent various behavioural design guidelines (such as facial masks, physical distancing, hand-washing, etc.) have an effect on the COVID spread and prevention, especially considering the fact that some people tend to sabotage these guidelines or not follow them closely (e.g., Ji et al., 2020).

¹ For the up-to-date numbers, see <https://coronavirus.jhu.edu/map.html>.

Under these circumstances, many businesses require or recommend that their employees (dependent on the local area pandemic situation) work from home. Naturally, many companies are concerned about cyber security of remote work (e.g., Caligiuri et al., 2020). The main problem with remote work cyber security is that remote business systems still rely on personal cyber hygiene of employees (Dwivedi et al., 2020). In addition, many businesses do not have a clear plan of what happens in case of a cyber security breach. As a result, employees do not know whom to contact to report cyber incidents, especially during a cyber emergency, and this is exasperated in a remote work environment. Who-does-what and who-reacts-to-what is not clearly identified (e.g., Gerke et al., 2020).

As companies get comfortable with work-from-home arrangements, their boundaries have now extended to their employee's home and the personal technologies in their homes. This is a vulnerability companies now must manage (e.g., Abukari and Bankas, 2020). Employees rarely have a good understanding of how secure their home systems are and whether they have the basic equipment to protect themselves (Forte and Power, 2007). For example, many people do not realise that their home Wi-Fi systems need to be correctly secured, which makes them vulnerable to so-called "snooping" attacks when adversaries interfere with the online traffic inside the house (e.g., Jang-Jaccard and Nepal, 2014).

Work from home also implies that employees are often not very careful with anti-viruses and security tools, which tend to come from untrusted sources or may be outdated. Another problem (especially in hi-tech businesses) is that people do not separate devices for work and leisure purposes, making it possible for malware accessed during leisure to cross over to work processes, and creating additional uncertainties and risks for their organizations. Even in large corporations which, prior to the pandemic, implemented strict cybersecurity rules and required that personal computers or smartphones were not used for work purposes, currently tend to issue new protocols and processes allowing the so-called "bring-your-own device" (BYOD) options – mobile devices from the employees, which require separate and special secure environments and networks (e.g., Wang et al., 2014).

Nevertheless, businesses are already starting to prepare for the end of the pandemic and the "new normal" by creating a set of processes and routines that will persist beyond the pandemic, and help them be better prepared for the future (e.g., Sakurai and Chughtai, 2020; Hacker et al., 2020). Much of the success of the "new normal" business design and implementation heavily depends on the acceleration of the Industrial Revolution 4.0 technological advances such as AI, data-driven analytics and processes, as well as intelligent automation supported by the next-generation information systems (e.g., Skilton and Hovsepian, 2017). At the same time, in their

formulation of what the “new normal” after the pandemic could look like, businesses can learn a lot from the social experiences in dealing with natural disasters, where information systems may be used to foster resilience against the crisis (Sakurai and Chughtai, 2020). Businesses can also achieve greater resilience through nurturing the new virtual sense of togetherness through the use of the web conferencing systems (Hacker et al., 2020). This paper uses a combination of qualitative and quantitative techniques in order to better understand corporate preferences, priorities and culture, which impact on the formulation of the “new normal” and foster anti-crisis resilience with particular emphasis on cybersecurity and information systems.

This paper tries to answer the following research questions: What are the top priority themes in the COVID response documents of major global businesses in 2020, which are likely to determine their post-pandemic response and formulation of a new normal? Are (any of) these priorities related to cybersecurity or, more generally, to information systems? What is the correlation between company’s financial success and resilience and priority themes in their COVID19 responses? How do COVID19 responses and strategies depend on external and internal cultural values?

This paper contributes to the emerging literature on the global pandemic business strategy, information systems and the new normal. This emerging literature covers a wide range of COVID-19 impacts from environmental to economic. Specifically, Mukherjee et al. (2020) consider the future environmental consequences of pandemic and conclude that in the post-pandemic world businesses are likely to return to the pre-COVID pollution rates, causing a “quantum” jump in the levels of pollution. Retzlaff (2020) and Bloomquist (2020) discuss the “new normal” providing several socio-economic scenarios. Siegal et al (2020), Cobiainchi et al (2020), Bajwa et al (2020), Walton (2020), Eardley (2020), Ng et al. (2020), Balakrishnan et al (2020), Tamagnini (2020), Tandale (2020), Anoushiravani et al (2020), Lanham (2020), Jiang et al (2020), Zoghbi et al (2020), Holtmann et al (2020), Sethi et al (2020), Zeegen et al. (2020), Lie et al (2020), consider how pandemic will affect medical services and emphasise that long-term pandemic readiness of beds and procedures in hospitals not only save lives, but also make medical services robust to external shocks.

Doolittle (2020) argues that post-COVID business development will call for better, more effective inclusion and diversity programmes within and outside organizations. Larcher and Brierley (2020) discuss the negative consequences of pandemic on children and how their physical and emotional state could be affected by the pandemic in the long term. Greenhow and Chapman (2020) consider social media, their benefits and drawbacks for helping people post-COVID. Reuter et al. (2020) consider the negative consequences of increased alcohol

consumption during pandemic in Africa and advocate for the alcohol restrictions post-pandemic. Hesse and Rafferty (2020) offer a new perspective on the development of cities under the “new normal”. Yang (2020) discusses new business governance structures under the “new normal”, which would allow “enacting technologies to revolutionize pandemic governance with proper institutional safeguards”. Triyason et al (2020) provide a roadmap for building effective post-COVID hybrid classrooms. Harwood (2020) discusses the difficulties of planning and forecasting for the new normal. Habersaat et al (2020) propose 10 principles for designing successful future-proof behavioural measures for post-COVID.

Yet, cybersecurity and information systems aspects of the “new normal” remain under-researched. The main contribution of this paper is to fill this gap by developing a valid theoretical methodology supported by feasible and realistic empirical test. The remainder of this paper is organized as follows. Section 2 provides methodology. Data is described in Section 3. Results are provided in Section 4. Finally, section 5 concludes.

2. Theoretical Approach

Our methodological approach combines qualitative and quantitative methodology. Specifically, the qualitative basis of our approach is inspired by the Massachusetts Institute of Technology (MIT) Cybersecurity at MIT Sloan (CAMS) model (Huang and Pearlson, 2019) of cybersecurity culture (henceforth, MIT CAMS model). The goal of the model (depicted on Figure 1) is to link cybersecurity behaviours with managerial influences. The model suggests that organizational culture influences behaviours for cybersecurity. Organizational culture can be described as the values, attitudes and beliefs held by leaders, groups, and individuals who make up the organization. These values, attitudes and beliefs are shaped by external influences such as country norms, industry norms, regulations and other constructs that are outside of direct managerial influence, and by managerial mechanisms (such as training, awareness programs, performance reviews, rewards, consequences, and corporate communications) that are directly under the control of organizational leaders. The MIT CAMS model was successfully applied to many contexts and case studies as well as achieved real-world impact in public and private sectors, becoming a hit amongst practitioners (see e.g., Huang and Madnick, 2019; Marotta and Pearlson, 2019; Macedo and Menting). The main advantage of the MIT CAMS model is that it allows to capture the factors of corporate culture and establish the causal links between these factors and observed behaviours in highly uncertain conditions with many unknowns

In order to adapt the MIT CAMS model rationale such that it would provide an insight into the post-COVID-19 “new normal” business priorities, which, in turn, would foster corporate business resilience, we extend the MIT CAMS model to the CAMS-inspired New Normal Model (CNNM) and propose a feasible and logical way of testing it. The CNNM is summarized on Figure 2.

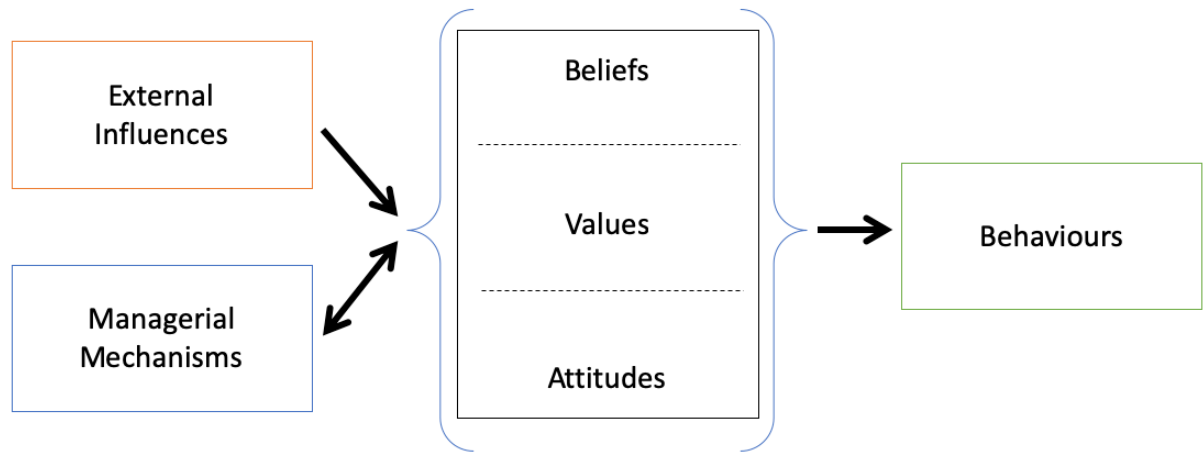


Figure 1 MIT CAMS Culture of Cybersecurity Model adapted from Huang and Pearlson, 2019

The CNNM links factors of corporate culture with corporate success in the time of uncertainty through corporate beliefs, value, and attitudes. Observable factors of external corporate culture (such as cultural value orientations of the country, where the company has its headquarters; cybersecurity culture of that country, etc.) together with factors of internal culture (such as managerial mechanisms of addressing pandemic challenges) form the latent corporate beliefs, value and attitudes, which, in turn, influence observable corporate success (resilience) during the pandemic.

Since corporate beliefs, values, and attitudes are latent, CNNM conjectures that observable factors of corporate culture which are positively and statistically significantly correlated with the observable corporate success are likely to constructively influence beliefs, values, and attitudes and, therefore, should form the core priorities for the desirable and realistic “new normal”. In this paper, we test the proposed model using publicly available data and quantitative methods, which include the topic modelling exercise combined with the econometric (regression) analysis.

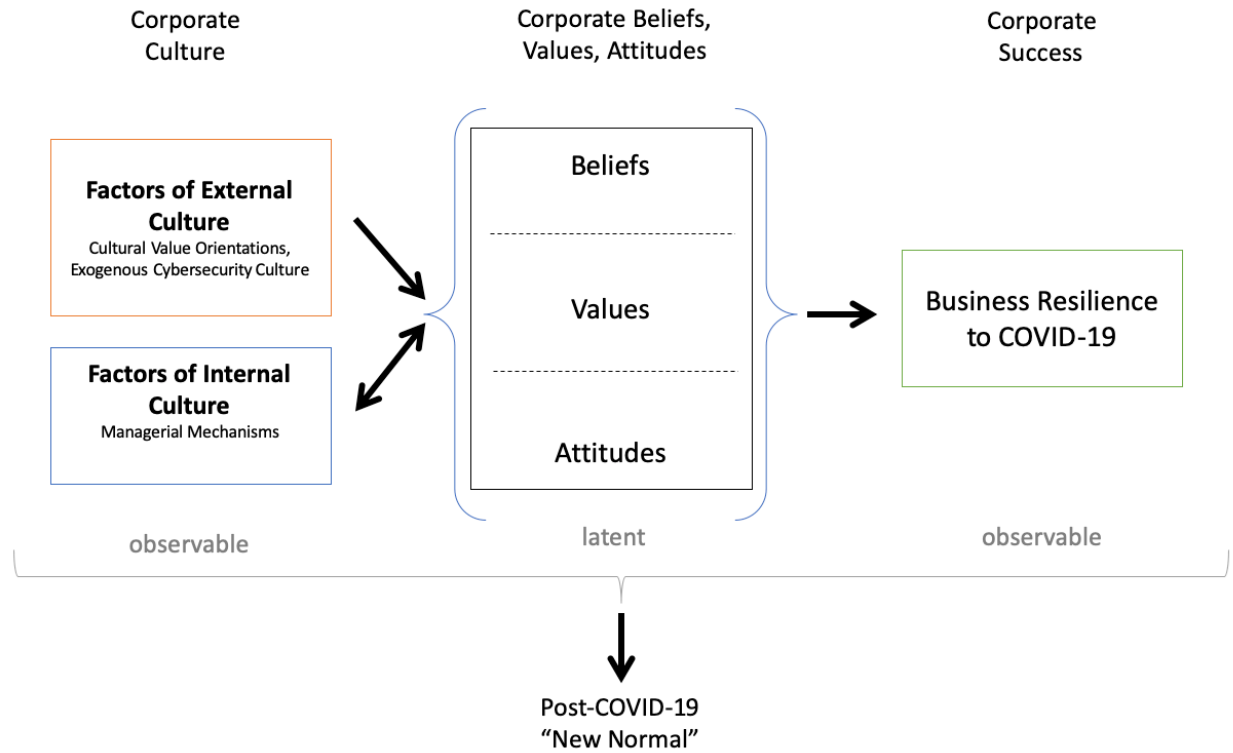


Figure 2 The CNNM Structure

3. Empirical Evidence

The data for this paper was compiled from several sources. First, the list of top 100 performing companies was downloaded from the Fortune 500 list for the year 2020. Two lists were used: the US Fortune 500² and the global Fortune 500³. This allowed us to create a final dataset of 200 companies, 100 companies from each list.

3.1. Factors of External Culture

Two factors - Cultural Value Orientations as well as Exogenous Cybersecurity Culture – were used to capture external culture. While Cultural Value Orientations measured general culture in the company’s country of registration (headquarters’ country), Exogenous Cybersecurity Culture reflected cybersecurity climate in that country.⁴ Cultural value orientations coefficients for different countries (Schwartz, 2006) were used as proxies of Cultural Value Orientations factor. Specifically, the Schwartz Value Survey (often referred to as SVS) asks

² See <https://fortune.com/fortune500/> for more detail.

³ See <https://fortune.com/global500/2020/search/> for more detail.

⁴ We used Exogenous Cybersecurity Culture factor because we are particularly interested in the COVID-19 impact on cybersecurity.

respondents to rate 57 (general human) values according to their importance as a “*guiding principle*” of a respondent’s life on a scale from -1 to 7, where the answer “*opposed to my values*” scores -1; “*not important*” scores 0; “*important*” has a score of 3; and “*of supreme importance*” yields a score of 7.⁵ SVS split all obtained values into 6 broad value clusters: Embeddedness, Autonomy, Harmony, Mastery, Egalitarianism, and Hierarchy, each representing a dimension of the cultural value orientation. These value orientations are polarized and form pairs of antipodes (Schwartz, 2006): Embeddedness (people consider themselves to be part of the collective) versus Autonomy (people view themselves as autonomous individuals); Harmony (desire to blend in with the nature) versus Mastery (desire to conquer the nature); and Egalitarianism (belief that all people are moral equals) versus Hierarchy (beliefs that hierarchy is necessary).

Interestingly, according to Schwartz (2006) Autonomy can be Affective (concentration of own utility) and Intellectual (concentration on increasing own educational capability, following own ideas and creativity). The cultural value orientation scores database containing individual scores for each of the described clusters Embeddedness, Intellectual Autonomy, Affective Autonomy, Harmony, Mastery, Egalitarianism, and Hierarchy and including 74 countries were provided to us by Professor Schwartz. Each score from every country in the database was calculated based on the cultural values’ survey conducted in the local language with representative samples of children and adults. These scores have been proven to be robust over time (e.g., Schwartz 2008, 2014; Lee et al., 2014).

Exogenous Cybersecurity Culture is captured by the Global Cybersecurity Index (GCI), calculated by the International Communications Union (ITU) based on 25 indicators forming 5 pillars, defined as follows⁶ (ITU General Model Framework, 2018, p. 4). Legal pillar includes “...[m]easures based on the existence of legal institutions and frameworks dealing with cybersecurity and cybercrime.” Technical pillar consists of “...[m]easures based on the existence of technical institutions and frameworks dealing with cybersecurity.” Organizational pillar incorporates “...[m]easures based on the existence of policy coordination institutions and strategies for cybersecurity development at the national level.” Capacity Building pillar contains “...[m]easures based on the existence of research and development, education and training programs; certified professionals and public sector agencies fostering capacity building”

⁵ The Appendix includes detailed description of each value instrument.

⁶ See https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2018-PDF-E.pdf for more detail.

Cooperation pillar is based on "...[m]easures based on the existence of partnerships, cooperative frameworks and information sharing networks."

Based on these five pillars (scores for each pillar are obtained through large-scale survey studies with governments of many countries around the world), five sub-coefficients (one per each pillar) are added up into one (Total) GCI coefficient. According to ITU, the GCI allows to measure "cybersecurity commitment" in different countries. The index allows to understand the relative strength of commitment to cybersecurity governance and regulation in different parts of the world from hundreds of countries. Generally, the higher the index, the more committed a nation is to regulating and governing cybersecurity. This research used the latest version of the GCI index available in the public domain since it was released at the end of 2018 by the International Communications Union.

3.2. Factors of Internal Culture, Corporate Success and Control

In order to capture managerial mechanisms in the COVID-19 conditions, we use corporate COVID-19 response documentation, which summarizes main corporate priorities and actions of the management, employees and customers at the time of the pandemic. To that end, the website of each company in our 200-companies' list was searched for the COVID response documentation and the text of the main response document was copied and stored. This text was used to map managerial priorities during COVID-19 using the topic modelling exercise (e.g., Hacker et al., 2020)

Data on each company's headquarters' location, cultural value orientations (matching these locations), Global Cybersecurity Index (also matching locations) were added to the dataset. These factors were used in the regression analysis as independent variables predicting business success, measured by the rank of the company in the Fortune 500 list. The higher is the ranking, the better was the financial standing of the company and, hence, its resilience to COVID-19 in 2020. In the US dataset and the global dataset, industries/sectors of the companies were used as control variables. In the global dataset, we also used countries, where the considered companies had headquarters as controls.

4. Results

4.1. Unsupervised Text Analysis

This research used the topic modelling latent Dirichlet allocation (LDA) model to map 10 most prominent topics in the COVID response documentation.⁷ The exercise provided us with the probabilistic mapping of topic frequency for each company. The following 10 topics were found to dominate the managerial mechanisms agenda in the US sample: *tackling dynamic situation; focus on community orientation; managing historic impact of the pandemic; focus on safety and wellbeing; focus on resilience; focus on risk and uncertainty avoidance; network safety and working from home; focus on financial response; providing service to people in order to achieve recovery; focus on health and safety*. Health and safety appear to be a dominant topic. Nevertheless, of these 10 topics, network safety and working from home are directly related to cybersecurity, whereas safety as wellbeing as well as risk and uncertainty avoidance are indirectly related to cybersecurity (see Table 1a).

Network security is particularly important in the Advanced tech industry and the Apparel sector, where, on average, companies focus on these concepts 41% and 46% of the time respectively. In the global dataset, the following 10 topics emerged from the topic modelling analysis: *tackling dynamic situation; health & safety; financial impact; economic stability; prevention and recovery; technology, digitization, automation; community orientation; global effort; frontline battle with pandemic; and risk and uncertainty aversion*. Though many topics are the same between the US and the global sample of companies (specifically, both samples reveal *tackling dynamic situation, health and safety, community orientation* and *risk and uncertainty aversion* as managerial priorities), the US businesses are primarily concerned with *health and safety*, while global businesses particularly emphasise *global effort* in COVID response.

⁷ The Stata 15 software was used to conduct the calculations. Though different number of topics was used for analysis, 10 turn out to be the optimal number. Calculations and code are available from the corresponding author upon request.

Table 1a Probabilistic Mapping of Business Priorities with Regard to COVID19 Response Strategies in the US sample

	p_tackling dynamic situation	p_community orientation	p_managing historic impact	p_safety and wellbeing	p_resilience	p_risk & uncertainty avoidance	p_network safety & work from home	p_financial response	p_service to people for recovery	p_health & safety
Advanced tech	0.003	0.002	0.003	0.023	0.007	0.086	0.410	0.007	0.059	0.400
Aerospace	0.004	0.043	0.003	0.150	0.040	0.038	0.055	0.229	0.013	0.425
Air transport	0.123	0.213	0.007	0.011	0.030	0.102	0.134	0.019	0.007	0.355
Apparel	0.013	0.001	0.002	0.000	0.001	0.012	0.466	0.191	0.026	0.289
Automotive	0.021	0.044	0.002	0.007	0.019	0.028	0.019	0.143	0.005	0.712
Banking, Financial Services	0.040	0.075	0.004	0.051	0.035	0.037	0.112	0.164	0.050	0.432
Chemicals	0.011	0.347	0.006	0.120	0.062	0.048	0.005	0.065	0.006	0.331
Computing and Conglomerate	0.033	0.100	0.005	0.005	0.007	0.083	0.012	0.109	0.088	0.558
Consumer goods	0.017	0.414	0.025	0.022	0.014	0.025	0.006	0.005	0.029	0.445
Conglomerate	0.011	0.078	0.001	0.007	0.169	0.130	0.003	0.049	0.020	0.533
Courier	0.119	0.011	0.010	0.003	0.178	0.036	0.006	0.108	0.062	0.467
Defence	0.020	0.002	0.008	0.563	0.019	0.038	0.006	0.095	0.026	0.224
Energy	0.007	0.337	0.001	0.023	0.002	0.281	0.043	0.053	0.002	0.252
Food	0.280	0.021	0.003	0.003	0.153	0.046	0.004	0.118	0.006	0.367
Health Care	0.059	0.072	0.004	0.007	0.016	0.038	0.031	0.085	0.055	0.633
Heavy equipment	0.002	0.003	0.002	0.002	0.149	0.042	0.225	0.228	0.004	0.345
Insurance	0.041	0.082	0.002	0.198	0.013	0.156	0.025	0.118	0.013	0.351
Media & Entertainment	0.369	0.009	0.005	0.014	0.010	0.004	0.001	0.066	0.075	0.446
Networking	0.003	0.004	0.005	0.005	0.543	0.029	0.002	8E-04	0.014	0.395
Oil and gas	0.024	0.088	0.004	0.009	0.138	0.008	0.005	0.006	0.121	0.598
Petroleum	0.002	0.005	0.044	0.007	0.12	0.005	0.184	0.298	0.008	0.327
Pharmaceutical	0.005	0.054	0.002	0.118	0.084	0.014	0.052	0.129	0.055	0.486
Retail	0.157	0.006	0.002	0.031	0.017	0.027	0.051	0.056	0.127	0.526
Semiconductors	0.006	0.447	0.001	0.02	0.043	0.003	0.002	0.003	0.004	0.472
Social media	0.164	0.001	0.003	0.008	0.002	0.067	0.014	0.278	0.001	0.462
Telecommunication	0.04	0.019	0.002	0.005	0.075	0.013	0.022	0.213	0.008	0.604
Wholesale	0.003	0.432	0.002	0.002	0.002	0.001	0.002	0.143	6E-04	0.412

Notes: each column of the table shows probability of each topic accumulated by sector. Probabilities in each row add up to 1. Relatively large probabilities are shown in green, medium – in yellow and small – in red.

Table 1b Probabilistic Mapping of Business Priorities with Regard to COVID19 Response Strategies in the global sample

	p_tackling dynamic situation	p_health & safety	p_financial impact	p_economic stability	p_prevention and recovery	p_technology, digitization, automation	p_community orientation	p_global effort	p_frontline battle with pandemic	p_risk & uncertainty aversion
Automotive	0.085	0.075	0.024	0.154	0.011	0.046	0.050	0.445	0.106	0.005
Banking, Financial Services	0.037	0.078	0.038	0.070	0.089	0.095	0.069	0.417	0.104	0.002
Commodity	0.278	0.136	0.006	0.072	0.003	0.009	0.009	0.477	0.003	0.006
Computing	0.029	0.005	0.526	0.026	0.007	0.002	0.001	0.388	0.001	0.016
Computing & Conglomerate	0.014	0.036	0.053	0.034	0.091	0.012	0.053	0.547	0.153	0.007
Conglomerate	0.088	0.041	0.075	0.132	0.040	0.038	0.094	0.400	0.090	0.002
Construction	0.035	0.051	0.158	0.026	0.091	0.059	0.032	0.429	0.117	0.003
Courier	0.003	0.009	0.001	0.035	0.008	0.577	0.007	0.358	0.001	0.001
Electric utility	0.340	0.041	0.007	0.013	0.002	0.224	0.027	0.279	0.041	0.026
Electronics	0.013	0.162	0.014	0.011	0.009	0.024	0.094	0.606	0.061	0.005
Food	0.009	0.005	0.003	0.002	0.002	0.005	0.002	0.524	0.447	0.001
Health Care	0.033	0.030	0.012	0.055	0.028	0.160	0.067	0.566	0.041	0.008
Holding company	0.157	0.066	0.051	0.256	0.007	0.005	0.020	0.424	0.011	0.004
Oil and gas	0.114	0.029	0.048	0.080	0.111	0.066	0.054	0.350	0.138	0.012
Petroleum refining	0.002	0.034	0.531	0.081	0.004	0.009	0.001	0.236	0.001	0.102
Pharmaceutical	0.012	0.078	0.012	0.088	0.073	0.018	0.029	0.656	0.031	0.004
Retail	0.047	0.207	0.039	0.124	0.010	0.043	0.078	0.142	0.142	0.168
Telecommunications	0.017	0.038	0.067	0.035	0.136	0.011	0.098	0.393	0.203	0.003
Trading	0.003	0.054	0.019	0.293	0.005	0.010	0.024	0.386	0.207	0.001

Notes: each column of the table shows probability of each topic accumulated by sector. Probabilities in each row add up to 1. Relatively large probabilities are shown in green, medium – in yellow and small – in red.

In the global dataset, technology, digitization, automation as well as risk and uncertainty are directly and indirectly related to cybersecurity correspondingly. The global dataset also allows us to map the topics by country of business origin for the global sample (see Table 2).

Table 2 Probabilistic Mapping of Business Priorities with Regard to COVID19 Response Strategies in the global sample by country of headquarters

	p_tackling dynamic situation	p_health & safety	p_financial impact	p_economic stability	p_prevention and recovery	p_technology, digitization, automation	p_community orientation	p_global effort	p_frontline battle with pandemic	p_risk & uncertainty aversion
China	0.082	0.037	0.101	0.08	0.07	0.069	0.045	0.45	0.055	0.011
France	0.006	0.446	0.116	0.009	0.002	0.007	0.044	0.196	0.172	0.002
Germany	0.017	0.068	0.026	0.268	0.005	0.027	0.105	0.326	0.153	0.005
India	0.007	0.001	7E-04	0.022	9E-04	0.005	0.002	0.243	0.717	5E-04
Italy	0.24	0.071	0.002	0.003	0.003	0.231	0.044	0.403	0.002	0.001
Japan	0.139	0.056	0.01	0.117	0.01	0.006	0.131	0.382	0.145	0.004
Netherlands	0.006	0.007	0.1	0.51	0.011	0.004	0.003	0.349	0.006	0.005
Netherlands and	0.022	0.02	0.01	0.022	0.022	0.137	0.014	0.324	0.394	0.036
Russia	0.104	0.008	0.024	0.099	0.229	0.174	0.027	0.329	0.005	0.002
Saudi Arabia	0.04	0.02	0.104	0.007	0.265	0.211	0.009	0.281	0.044	0.021
South Korea	0.003	0.146	0.004	0.023	0.007	0.026	0.233	0.252	0.304	0.003
Spain	0.025	0.016	0.002	0.027	0.001	0.095	0.003	0.236	0.596	6E-04
Switzerland	0.188	0.092	0.005	0.049	0.003	0.008	0.006	0.493	0.151	0.005
Taiwan	0.008	0.012	0.028	0.009	0.007	0.005	0.012	0.91	0.003	0.005
UK	0.01	0.009	0.025	0.099	0.155	0.26	0.005	0.295	0.138	0.005
USA	0.055	0.044	0.045	0.075	0.075	0.057	0.055	0.487	0.078	0.029

Notes: each column of the table shows probability of each topic accumulated by country. Probabilities in each row add up to 1. Relatively large probabilities are shown in green, medium – in yellow and small – in red.

4.2. Supervised Text Analysis

In addition to topic modelling, the research process included a simple (“supervised”) word search in the text of the COVID19 responses, where both terms of interest, specifically, terms related to cybersecurity, digital technology, and COVID (such as “cybersecurity”) and terms derived from the topic modelling exercise (such as “health”, “wellbeing”, etc.) were included. Table 3a summarizes the outcome of the search for the US sample and Table 3b – for the global sample.

Table 3a US Sample Supervised Word Choice Results

	cybersecurity	security	cyber	safety	fraud	network	future	wellbeing	health	finance	new normal	manag_	service	risk	resilience	uncertainty
Advanced tech	0	3	0	0	0	0	0	0	3	0	0	0	3	3	0	0
Aerospace	1	4	3	10	0	2	0	0	5	1	0	8	4	0	0	0
Air transport	1	4	1	10	0	4	9	0	9	1	0	2	8	7	0	0
Apparel	0	0	0	0	0	0	0	0	19	0	0	0	1	0	2	0
Automotive	0	0	0	16	0	0	0	0	19	5	0	0	13	0	0	0
Banking, Financial Services	0	10	0	12	10	15	8	3	64	10	2	33	41	24	1	9
Chemicals	0	0	0	2	0	0	0	0	2	0	0	2	0	0	0	0
Computing and Conglomerate	10	32	21	16	1	9	12	1	55	3	2	17	54	18	11	3
Consumer goods	0	0	0	2	0	0	0	0	13	0	0	1	2	0	0	0
Conglomerate	0	0	0	4	0	0	0	0	6	0	2	1	2	0	1	0
Courier	0	0	0	2	0	4	0	0	2	0	0	0	13	0	0	0
Defence	0	2	0	1	0	0	0	0	5	0	0	0	1	1	0	0
Energy	0	0	0	3	0	0	1	0	2	0	0	0	7	0	0	0
Food	0	3	0	20	0	3	1	0	33	0	0	2	4	5	1	0
Health Care	0	5	1	21	0	13	20	1	128	0	0	29	38	30	1	3
Heavy equipment	0	0	0	1	0	0	0	0	6	0	0	1	2	0	0	0
Insurance	0	1	0	5	1	1	3	0	24	0	0	2	9	5	0	1
Media & Entertainment	0	0	0	3	0	0	0	0	6	0	0	1	1	3	0	0
Networking	4	13	9	0	0	10	0	0	5	0	0	2	1	1	1	0
Oil and gas	1	4	1	13	0	1	3	0	23	1	0	6	12	6	0	3
Petroleum	0	0	0	1	0	0	0	0	2	0	0	1	1	0	0	0
Pharmaceutical	0	0	0	19	0	2	4	1	70	0	0	6	11	3	2	0
Retail	0	1	0	28	0	7	3	2	63	0	0	9	32	13	0	2
Semiconductors	0	0	0	6	0	0	0	0	3	0	0	2	6	0	0	0
Social media	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
Telecommunication	3	13	4	21	1	53	1	0	28	0	1	17	50	4	0	2
Wholesale	0	0	0	2	0	0	0	0	7	0	0	3	2	1	0	0
Total	20	95	40	218	13	124	65	8	609	21	7	145	318	124	20	23

Notes: each column shows the number of times a word of interest (depicted in the first row) was found by the natural language processing algorithm, accumulated by sector

Both Tables 3a and 3b show, that even though cybersecurity is a rare term in the COVID-related documentation of companies, information systems-related terms such as security, cyber, safety, network, service, and risk are common. Similar pattern is observed when term frequencies for the global dataset are accumulated by country.

Table 3b Global Sample Supervised Word Choice Results

	cybersecurity	security	cyber	safety	fraud	network	future	wellbeing	health	finance	new normal	manag_	service	risk	resilience	uncertainty
Automotive	0	1	0	45	0	0	1	0	76	6	0	6	48	0	0	0
Banking, Financial Services	0	10	1	13	0	15	12	3	61	46	1	50	87	47	3	7
Commodity	0	0	0	1	0	0	0	1	7	1	0	0	1	2	1	1
Computing	0	0	0	2	0	0	0	0	13	0	0	0	4	2	0	0
Computing & Conglomerate	0	4	0	6	1	3	1	0	17	1	0	4	12	2	0	1
Conglomerate	0	0	0	6	0	5	1	0	24	0	2	3	39	8	1	0
Construction	0	0	0	1	0	0	0	0	1	0	0	1	1	2	0	0
Courier	0	0	0	1	0	1	0	0	1	0	0	0	7	0	0	0
Electric utility	0	0	0	1	0	4	0	0	9	0	0	5	3	3	2	0
Electronics	0	0	0	0	0	0	2	0	6	0	0	1	10	1	1	0
Food	0	0	0	2	0	0	0	0	3	0	0	1	1	1	1	0
Health Care	0	3	0	11	0	5	5	1	80	0	0	21	22	15	0	1
Holding company	0	0	0	0	0	0	1	0	15	0	0	1	2	2	0	0
Oil and gas	1	5	1	26	0	5	7	0	67	2	0	25	28	15	5	1
Petroleum refining	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0
Pharmaceutical	0	0	0	6	0	3	0	0	30	0	0	4	2	1	0	0
Retail	0	0	0	9	0	0	0	0	20	0	0	1	12	3	0	0
Telecommunications	3	13	4	17	1	50	1	0	31	0	1	21	55	3	0	2
Trading	0	2	0	1	0	3	1	0	2	2	0	16	16	3	0	1
Total	4	38	6	148	2	94	32	5	464	58	4	160	353	110	14	14

Notes: each column shows the number of times a word of interest (depicted in the first row) was found by the natural language processing algorithm, accumulated by sector

Table 4 Global Sample Supervised Word Choice Results by Country

	cybersecurity	security	cyber	safety	fraud	network	future	wellbeing	health	finance	new normal	manag_	service	risk	resilience	uncertainty
China	0	2	0	8	0	5	8	0	39	28	1	46	86	32	1	0
France	0	2	1	7	0	1	0	0	15	8	0	6	12	0	0	0
Germany	0	0	0	2	0	11	2	0	7	0	0	8	44	5	0	1
India	0	0	0	2	0	2	0	0	3	0	0	1	3	0	0	0
Italy	0	0	0	1	0	4	0	0	9	0	0	6	3	16	2	0
Japan	0	1	0	25	0	0	1	0	35	1	0	8	36	3	0	1
Netherlands	0	0	0	0	0	0	1	0	12	0	0	1	2	2	0	0
Netherlands and UK	0	0	0	0	0	2	0	0	8	0	0	1	3	0	3	0
Russia	0	0	0	3	0	1	2	0	14	0	0	1	4	3	1	0
Saudi Arabia	0	0	0	1	0	0	0	0	7	0	0	0	0	0	1	1
South Korea	0	0	0	3	0	0	1	0	24	0	0	2	11	6	1	0
Spain	0	0	0	0	0	1	0	0	5	1	0	2	4	0	0	0
Switzerland	0	0	0	3	0	0	0	1	10	1	0	1	2	3	2	1
Taiwan	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
UK	0	3	0	3	0	4	1	2	12	1	0	9	17	3	2	2
USA	4	30	5	90	2	63	15	2	264	18	3	68	126	37	1	8
Total	4	38	6	148	2	94	32	5	464	58	4	160	353	110	14	14

Notes: each column shows the number of times a word of interest (depicted in the first row) was found by the natural language processing algorithm, accumulated by country

4.3. Econometric Analysis

Factors of external and internal culture were then included as independent variables into a clustered OLS regression. A company's rank in the Fortune 500 list was a dependent variable. Note, that the Fortune 500 rank runs from 1 (top performing company) to 500 (least successful company), meaning that the first company on the list is the most resilient towards COVID-19. This also implies that in the regression results negative coefficients refer to the positive relationship between variables, whereas positive coefficient is a sign of negative relationship between variables. Regression results are summarized in Tables 5 (for the US sample) and Table 6 (for the global sample).

Table 5 Results of the Clustered OLS Regression Prediction the Company Rank with clustering by sector: US Sample

Model 1				Model 2			
Explanatory variable:	Coef.	Robust SE	P>t	Explanatory variable:	Coef.	Robust SE	P>t
tackling dynamic situation ⁸	29.750	12.304	0.023	cybersecurity	0.378	8.101	0.963
community orientation	28.570	8.678	0.003	security	3.051	2.015	0.142
safety and wellbeing	43.000	11.294	0.001	cyber	-5.190	5.452	0.350
resilience	48.250	12.943	0.001	safety	-1.284	1.145	0.272
risk & uncertainty aversion	50.000	9.748	0.000	fraud	-0.791	0.579	0.184
network safety and work from home	37.570	10.553	0.001	network	0.035	0.610	0.955
financial response	33.220	8.981	0.001	future	1.834	1.343	0.184
service to people for recovery	40.000	8.995	0.000	wellbeing	-2.436	4.955	0.627
health & safety	-11.850	8.632	0.181	finance	-2.514	1.651	0.140
constant	41.000	8.788	0.000	new normal	-9.364	4.313	0.039
R ² = 0.673; N=100				manag_	-2.861	1.526	0.072
				service	-1.347	0.763	0.089
				risk	0.877	1.129	0.444
				resilience	6.335	3.568	0.088
				uncertainty	5.968	5.508	0.289
				constant	57.352	5.276	0.000
				R ² = 0.133; N=100			

Table 5 Model 1 shows that all (unsupervised) topics except for *health and safety* are positive and significant, meaning that concentration of these topics is associated with less financial success and less resilient behaviour. Model 2 shows that supervised topics reveal that concentration on the “new normal” for post-COVID-19 is associated with higher business success and, hence, better resilience (variable “new normal” is negative and significant at 5% level). Focus on *managing/management* (variable *manag_*) of risks is negative and marginally significant at 10% level. Concentrating on service is also negative and marginally significant at 10% level.

⁸ Frequency of each topic is calculated and used in the regression.

Table 6 Results of the Clustered OLS Regression Prediction the Company Rank with clustering by country: Global Sample

Model 1				Model 2			
Explanatory variable:	Coef.	Robust SE	P>t	Explanatory variable:	Coef.	Robust SE	P>t
tackling dynamic situation	-2.140	11.760	0.859	cybersecurity	39.017	26.507	0.165
health & safety	10.890	31.590	0.736	security	2.849	3.111	0.377
financial impact	-10.100	7.579	0.204	cyber	-24.352	18.360	0.208
economic stability	-2.040	9.1060	0.827	safety	0.042	1.486	0.978
prevention and recovery	-6.160	17.400	0.729	fraud	-22.185	11.862	0.084
technology, digitization, automation	8.191	9.436	0.401	network	-0.555	0.444	0.233
community orientation	20.630	14.900	0.189	future	4.208	4.724	0.389
global effort	-4.600	8.104	0.580	wellbeing	4.670	10.281	0.657
frontline battle with pandemic	-9.090	10.580	0.406	health	-0.138	0.688	0.845
risk & uncertainty aversion	-45.800	7.0580	0.000	finance	-0.874	2.564	0.739
global cybersecurity index (gci)	311.600	141.200	0.046	new normal	8.374	7.184	0.265
harmony	131.000	35.260	0.003	manag_	-0.483	1.410	0.738
embedded	-11.300	85.090	0.896	service	0.299	1.230	0.811
hierarchy	85.980	44.470	0.075	risk	-0.116	1.585	0.942
mastery	-7.610	73.460	0.919	resilience	1.259	9.594	0.898
affective autonomy	-28.300	37.500	0.464	uncertainty	9.141	6.149	0.161
intellectual autonomy	-68.300	40.960	0.119	gci	363.416	141.757	0.024
egalitarianism	109.200	38.970	0.015	harmony	147.076	53.226	0.016
constant	-939	680.200	0.191	embedded	-45.571	97.873	0.649
R ² = 0.199; N=98				R ² = 0.1928; N=98			

Table 6 Model 1 shows that, on the one hand, focus on risk and uncertainty aversion is negative and significant at 0.1% level, which means that the higher is the concentration on this priority within a company, the more successful and resilient it is; on the other hand, high cybersecurity index, harmony, hierarchy and egalitarianism in the external culture are associated with lower resilience and worse financial standing of the business. Table 6 Model 2 shows that focus on tackling (digital) fraud positively influences business success and resilience (marginally significant at 10% level), whereas high external cybersecurity index, as well as large harmony index are associated with lower financial success and resilience of a company.

5. Conclusion

This paper aims to probabilistically map post-COVID19 business “new normal” futures focusing on cybersecurity and investigating how this “new normal” is influenced by the external culture of the companies, their industrial specializations (context) as well as corporate values. Our approach informed by the new CNNM model is inspired by the MIT CAMS cybersecurity culture model, which focuses on factors of external and internal corporate culture as well as behaviour in identification of the post-COVID new normal priorities. The main contribution of this paper is providing a theoretical underpinning complemented by an empirical test to

understanding how the post-COVID new normal strategies should be formed for businesses. We show that the post-COVID new normal needs to take into account factors of internal and external corporate culture.

We use the Forbes Fortune 500 US and Fortune 500 international list of companies to extract and combine the following data sources: (i) the COVID19 response documents; (ii) cultural value orientations as per Shlomo Schwartz (Schwartz, 1992, 2006) theory and global cyber security index (ITU, 2019; Kharlamov and Pogrebna, 2019) values based on the business headquarters' location; (iii) corporate industrial value context (industries where companies operate).

We use unsupervised topic modelling to map priority directions from the COVID19 response documents as well as supervised keyword search for cybersecurity-related themes in order to identify main strategic themes for the future. We identify similarities and dissimilarities between the obtained themes and the cultural value orientation factors (propensity to focus on embeddedness, autonomy, hierarchy, egalitarianism, mastery, or harmony) as well as the Global Cybersecurity Index in the business headquarters' country; and industries where companies operate. Results from text analytics are combined to produce a comprehensive and probabilistic mapping of topics, which form top priority themes in the corporate COVID19 response both in the US and globally, organized in a heatmap. We then use regression analysis to see whether concentration on particular themes is correlated with higher standing in the Forbes Fortune 500 list.

Our results suggest that reaching a successful new normal requires businesses to concentrate on management of risks, risk and uncertainty aversion, as well as on tackling (digital) fraud. Our findings also imply that companies, which specifically think about the new normal (i.e., are future-driven), rather than simply trying to address the day-to-day COVID-19 challenges reach higher financial success and resilience.

This research has important implications for understanding the “new normal” practices for business. Managers can use these results to better formulate priorities in their COVID and post-COVID strategies in order to reach the new normal more efficiently and quickly. Policy makers can use our findings to better understand how suboptimal features of external (country) culture (such as Hierarchy and Harmony cultural value orientations) could damage business success in effectively reaching the new normal; and think of ways to offset cultural effects with appropriate fiscal and monetary incentives as well as thoughtful policies. Our findings also provide value to scholars as future research needs to better understand not only which features of external and internal corporate culture influence the new normal, but also how these features

are formed in the first place and how stable these features are. It is left to future research to explore these issues.

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**Appendix
(Not Intended for Publication)**

Using Schwartz Value Survey to Measure Seven Cultural Value Orientations

We use data collected from 74 countries using the Schwartz Value Survey (SVS) which form proxies for seven cultural value orientations. Initially, SVS contained 56 indicators which were later extended to 57 indicators and then to 58 indicators. The most widely used SVS contains 57 indicators. Each indicator is a measure of a specific value. Table A provides a summary of all 57 indicators.

Table A Schwartz Value Survey Indicators and Their Meaning Part 1

ID	SVS Indicator	Meaning
1	EQUALITY	equal opportunity for all
2	INNER HARMONY	at peace with myself
3	SOCIAL POWER	control over others, dominance
4	PLEASURE	gratification of desires
5	FREEDOM	freedom of action and thought
6	A SPIRITUAL LIFE	emphasis on spiritual not material matters
7	SENSE OF BELONGING	feeling that others care about me
8	SOCIAL ORDER	stability of society
9	AN EXCITING LIFE	stimulating experiences
10	MEANING IN LIFE	a purpose in life
11	POLITENESS	courtesy, good manners
12	WEALTH	material possessions, money
13	NATIONAL SECURITY	protection of my nation from enemies
14	SELF RESPECT	belief in one's own worth
15	RECIPROCATION OF FA- VOURS	avoidance of indebtedness
16	CREATIVITY	uniqueness, imagination
17	A WORLD AT PEACE	free of war and conflict
18	RESPECT FOR TRADITION	preservation of time-honoured customs
19	MATURE LOVE	deep emotional & spiritual intimacy
20	SELF-DISCIPLINE	self-restraint, resistance to temptation
21	PRIVACY	the right to have a private sphere
22	FAMILY SECURITY	safety for loved ones
23	SOCIAL RECOGNITION	respect, approval by others
24	UNITY WITH NATURE	fitting into nature
25	A VARIED LIFE	filled with challenge, novelty and change
26	WISDOM	a mature understanding of life
27	AUTHORITY	the right to lead or command
28	TRUE FRIENDSHIP	close, supportive friends
29	A WORLD OF BEAUTY	beauty of nature and the arts
30	SOCIAL JUSTICE	correcting injustice, care for the weak
31	INDEPENDENT	self-reliant, self-sufficient
32	MODERATE	avoiding extremes of feeling & action
33	LOYAL	faithful to my friends, group
34	AMBITIOUS	hard-working, aspiring
35	BROADMINDED	tolerant of different ideas and beliefs
36	HUMBLE	modest, self-effacing

Table A Schwartz Value Survey Indicators and Their Meaning Part 2

ID	SVS Indicator	Meaning
37	DARING	seeking adventure, risk
38	PROTECTING THE ENVIRONMENT	preserving nature
39	INFLUENTIAL	having an impact on people and events
40	HONOURING OF PARENTS AND ELDERS	showing respect
41	CHOOSING OWN GOALS	selecting own purposes
42	HEALTHY	not being sick physically or mentally
43	CAPABLE	competent, effective, efficient
44	ACCEPTING MY PORTION IN LIFE	submitting to life's circumstances
45	HONEST	genuine, sincere
46	PRESERVING MY PUBLIC IMAGE	protecting my "face"
47	OBEDIENT	dutiful, meeting obligations
48	INTELLIGENT	logical, thinking
49	HELPFUL	working for the welfare of others
50	ENJOYING LIFE	enjoying food, sex, leisure, etc.
51	DEVOUT	holding to religious faith & belief
52	RESPONSIBLE	dependable, reliable
53	CURIOUS	interested in everything, exploring
54	FORGIVING	willing to pardon others
55	SUCCESSFUL	achieving goals
56	CLEAN	neat, tidy
57	SELF-INDULGENT	doing pleasant things

Notes: Indicators are presented exactly as described in Schwartz, Shalom H. (2009). Draft Users Manual: Proper Use of the Schwarz Value Survey, version 14 January 2009, compiled by Romie F. Littrell. Auckland, New Zealand: Centre for Cross Cultural Comparisons, <http://www.crossculturalcentre.homestead.com>. In the latest version of SVS, one additional indicator was added (“OBSERVING SOCIAL NORMS” which means “to maintain face”). However, this indicator is not relevant for our study as it was not used in surveys which formed the dataset used in our paper.

In the SVS, each participant is presented with value indicators and their meanings (see Table A) in their native language and asked to rate the importance of each value indicator “*as a guiding principle in [THEIR] life*” on a 4-fold scale, where the answer “*of supreme importance*” receives a score of 7, “*important*” receives a score of 3, “*not important*” receives a score of 0 and “*opposed to my values*” receive s score of -1. Table B summarizes the way in which cultural value orientations are formed, i.e., it shows the value indicators included in each cultural human value construct category.

Table B Composition Human Value Constructs

Human value constructs at a cultural level	SVS Indicator IDs	SVS Indicators included
Embeddedness	8, 11, 13, 15, 18, 20, 26, 32, 40, 46, 47, 51, 54, 56	SOCIAL ORDER; POLITENESS; NATIONAL SECURITY; RECIPROCATION OF FAVOURS; RESPECT FOR TRADITION; SELF DISCIPLINE; WISDOM; MODERATE; HONOURING OF PARENTS AND ELDERLY; PRESERVING MY PUBLIC IMAGE; OBEDIENT; DEVOUT; FORGIVING; CLEAN
Affective autonomy	4, 9, 25, 50, 57	PLEASURE; AN EXCITING LIFE; A VARIED LIFE; ENJOYING LIFE; SELF-INDULGENT
Intellectual autonomy	5, 16, 35, 53	FREEDOM; CREATIVITY; BROADMINDED; CURIOUS
Harmony	17, 24, 29, 38	A WORLD AT PEACE; UNITY WITH NATURE; A WORLD OF BEAUTY; PROTECTING THE ENVIRONMENT
Mastery	23, 31, 34, 37, 39, 41, 43, 55,	SOCIAL RECOGNITION; INDEPENDENT; AMBITIOUS; DARING; INFLUENTIAL; CHOOSING OWN GOALS; CAPABLE; SUCCESSFUL
Hierarchy	3, 12, 27, 36, 39	SOCIAL POWER; WEALTH; AUTHORITY; HUMBLE; INFLUENTIAL
Egalitarianism	1, 30, 33, 45, 49, 52	EQUALITY; SOCIAL JUSTICE; LOYAL; HONEST; HELPFUL; RESPONSIBLE

Table C Topic Modelling Results: US List

Company	p_tackling dynamic situation	p_community orientation	p_managing historic impact	p_safety and wellbeing	p_resilience	p_risk & uncertainty avoidance	p_network safety & work from home	p_financial response	p_service to people for recovery	p_health & safety
Walmart	0.0021	0.0045	0.0062	0.0070	0.0169	0.0045	0.0202	0.0111	0.0053	0.9222
Amazon.com	0.0035	0.0239	0.0020	0.0017	0.0257	0.0026	0.0088	0.0039	0.0920	0.8359
Exxon Mobil	0.0045	0.0105	0.0015	0.0037	0.0215	0.0081	0.0012	0.0031	0.1118	0.8341
Apple	0.0376	0.0258	0.0031	0.0040	0.0050	0.0385	0.0017	0.0050	0.0655	0.8139
CVS Health	0.0037	0.0050	0.0184	0.0313	0.0041	0.0425	0.0883	0.0037	0.0054	0.7976
Berkshire Hathaway	0.0012	0.0004	0.0005	0.0017	0.2123	0.0010	0.0008	0.0005	0.0005	0.7813
UnitedHealth Group	0.0013	0.0548	0.0011	0.0021	0.0226	0.0011	0.0021	0.1138	0.0209	0.7803
McKesson	0.0049	0.0030	0.0026	0.0063	0.0063	0.0114	0.0652	0.0016	0.1209	0.7780
AT&T	0.0044	0.0386	0.0015	0.0097	0.0131	0.0270	0.0057	0.1173	0.0070	0.7757
AmerisourceBergen	0.0153	0.0111	0.0058	0.1201	0.0037	0.0111	0.0312	0.0048	0.0397	0.7571
Alphabet	0.0026	0.0031	0.0012	0.0040	0.0035	0.0083	0.0258	0.0097	0.2045	0.7374
Ford Motor	0.0412	0.0822	0.0024	0.0132	0.0339	0.0542	0.0316	0.0046	0.0030	0.7337
Cigna	0.0198	0.0018	0.0014	0.0018	0.0012	0.0016	0.0101	0.1100	0.1199	0.7323
Costco Wholesale	0.0053	0.0303	0.0068	0.1271	0.0599	0.0068	0.0218	0.0098	0.0093	0.7231
Chevron	0.0115	0.0023	0.0052	0.0124	0.1143	0.0187	0.0078	0.0149	0.0908	0.7222
Cardinal Health	0.0040	0.0047	0.0053	0.0047	0.0153	0.0352	0.0090	0.1972	0.0028	0.7218
JPMorgan Chase	0.0086	0.0277	0.0016	0.0026	0.0480	0.0065	0.0086	0.1328	0.0553	0.7084
General Motors	0.0017	0.0061	0.0009	0.0013	0.0043	0.0013	0.0069	0.2806	0.0069	0.6899
Walgreens Boots Alliance	0.0012	0.1324	0.0012	0.0439	0.0194	0.0012	0.0041	0.0804	0.0430	0.6732
Verizon Communications	0.0076	0.0299	0.0009	0.0063	0.2710	0.0055	0.0035	0.0073	0.0060	0.6620
Microsoft	0.0176	0.0323	0.0029	0.0035	0.0035	0.2821	0.0080	0.0048	0.0022	0.6431
Marathon Petroleum	0.0043	0.0907	0.0018	0.0021	0.0021	0.0037	0.0142	0.0037	0.2379	0.6395
Kroger	0.0019	0.0073	0.0010	0.0019	0.0026	0.0026	0.0461	0.0946	0.2035	0.6385
Fannie Mae	0.0068	0.0081	0.0033	0.0112	0.0051	0.2596	0.0521	0.0125	0.0095	0.6319
Bank of America	0.0060	0.2625	0.0016	0.0638	0.0048	0.0162	0.0029	0.0079	0.0035	0.6308
Home Depot	0.0163	0.0015	0.0008	0.0023	0.0338	0.0013	0.0029	0.0440	0.2678	0.6293
Phillips 66	0.0079	0.0605	0.0073	0.0183	0.0044	0.0138	0.0024	0.0011	0.2562	0.6280
Comcast	0.1391	0.0035	0.0022	0.0014	0.0108	0.0173	0.0010	0.2022	0.0031	0.6193
Anthem	0.0306	0.0018	0.0006	0.0033	0.0011	0.0013	0.0030	0.1950	0.1810	0.5822
Wells Fargo	0.0239	0.0014	0.0022	0.0033	0.0083	0.0190	0.0016	0.0025	0.3584	0.5795

Citigroup	0.0040	0.0046	0.0058	0.0052	0.0102	0.0065	0.0102	0.3954	0.0052	0.5529
Valero Energy	0.0258	0.3589	0.0032	0.0177	0.0019	0.0010	0.0010	0.0090	0.0291	0.5524
General Electric	0.0301	0.2306	0.0023	0.0089	0.0053	0.0038	0.0053	0.1441	0.0175	0.5522
Dell Technologies	0.0003	0.2681	0.0005	0.0125	0.0016	0.0124	0.0184	0.1305	0.0264	0.5292
Johnson & Johnson	0.0041	0.0057	0.0008	0.0020	0.0014	0.0065	0.1737	0.1250	0.1565	0.5242
State Farm Insurance	0.0097	0.0109	0.0010	0.0044	0.0032	0.0147	0.0402	0.3408	0.0623	0.5130
Target	0.2951	0.0011	0.0018	0.0018	0.0197	0.1561	0.0024	0.0148	0.0028	0.5042
International Business Machines	0.1270	0.0032	0.0032	0.0132	0.0082	0.3413	0.0039	0.0046	0.0018	0.4936
Raytheon Technologies	0.0040	0.0025	0.0015	0.0057	0.1024	0.0606	0.0131	0.2876	0.0332	0.4895
Boeing	0.0005	0.0011	0.0010	0.4392	0.0084	0.0497	0.0046	0.0030	0.0039	0.4886
Freddie Mac	0.0115	0.0037	0.0007	0.0010	0.0267	0.0128	0.4030	0.0518	0.0020	0.4866
Centene	0.0662	0.0840	0.0038	0.0021	0.0156	0.1945	0.1008	0.0030	0.0435	0.4865
United Parcel Service	0.0099	0.0023	0.0175	0.0053	0.3423	0.0095	0.0019	0.0049	0.1228	0.4835
Lowe's	0.0551	0.0013	0.0006	0.0240	0.0155	0.0419	0.3759	0.0010	0.0033	0.4816
Intel	0.0061	0.4467	0.0014	0.0200	0.0426	0.0026	0.0020	0.0032	0.0038	0.4716
Facebook	0.1644	0.0014	0.0028	0.0080	0.0015	0.0673	0.0139	0.2778	0.0011	0.4618
FedEx	0.2288	0.0206	0.0024	0.0009	0.0140	0.0624	0.0106	0.2101	0.0006	0.4496
MetLife	0.0036	0.1811	0.0028	0.0176	0.0028	0.0040	0.0036	0.3331	0.0023	0.4490
Walt Disney	0.3689	0.0090	0.0054	0.0137	0.0101	0.0040	0.0012	0.0660	0.0754	0.4463
Procter & Gamble	0.0170	0.4137	0.0245	0.0220	0.0137	0.0245	0.0062	0.0046	0.0286	0.4452
PepsiCo	0.3761	0.0018	0.0034	0.0018	0.0211	0.0073	0.0014	0.1493	0.0045	0.4333
Humana	0.3413	0.0024	0.0036	0.0024	0.0752	0.0392	0.0024	0.1019	0.0021	0.4295
Prudential Financial	0.0063	0.0010	0.0020	0.0073	0.0617	0.0009	0.1314	0.0036	0.3598	0.4261
Archer Daniels Midland	0.5417	0.0019	0.0028	0.0024	0.0024	0.0131	0.0045	0.0015	0.0058	0.4239
Albertsons	0.0024	0.0040	0.0015	0.0157	0.0027	0.0031	0.0015	0.2208	0.3346	0.4137
Sysco	0.0033	0.4324	0.0020	0.0019	0.0015	0.0013	0.0019	0.1431	0.0006	0.4119
Lockheed Martin	0.0034	0.0020	0.0029	0.0227	0.0070	0.0861	0.4097	0.0074	0.0587	0.4002
HP	0.0411	0.5181	0.0204	0.0032	0.0065	0.0027	0.0027	0.0036	0.0015	0.4002
Energy Transfer	0.0015	0.0076	0.0039	0.0126	0.0062	0.0062	0.0012	0.5540	0.0066	0.4002
Goldman Sachs Group	0.0078	0.0031	0.0024	0.0058	0.0038	0.0031	0.0024	0.5669	0.0065	0.3983
Morgan Stanley	0.0038	0.0044	0.0025	0.0021	0.0091	0.0275	0.5346	0.0058	0.0130	0.3972
Caterpillar	0.0014	0.0018	0.0014	0.0010	0.0039	0.0392	0.0988	0.4524	0.0039	0.3961
Cisco Systems	0.0025	0.0044	0.0047	0.0054	0.5426	0.0286	0.0021	0.0008	0.0136	0.3953
Pfizer	0.0065	0.0010	0.0012	0.0072	0.0184	0.0083	0.0078	0.5551	0.0011	0.3935

HCA Healthcare	0.0569	0.4898	0.0009	0.0071	0.0052	0.0112	0.0020	0.0367	0.0009	0.3891
American International Group	0.0027	0.4834	0.0002	0.0056	0.0002	0.0032	0.0009	0.1155	0.0011	0.3872
American Express	0.5214	0.0897	0.0002	0.0005	0.0021	0.0008	0.0008	0.0016	0.0014	0.3816
Delta Air Lines	0.3234	0.0212	0.0124	0.0036	0.0153	0.1774	0.0197	0.0460	0.0124	0.3686
Merck	0.0006	0.0686	0.0004	0.5204	0.0005	0.0221	0.0232	0.0011	0.0006	0.3625
American Airlines Group	0.0291	0.0011	0.0020	0.0218	0.0725	0.1201	0.3819	0.0088	0.0036	0.3593
Charter Communications	0.0099	0.0024	0.0020	0.0024	0.0049	0.0009	0.0787	0.5260	0.0154	0.3575
Allstate	0.0113	0.0101	0.0018	0.5301	0.0473	0.0113	0.0014	0.0287	0.0010	0.3570
New York Life Insurance	0.1150	0.3992	0.0014	0.0075	0.0036	0.0042	0.0036	0.1244	0.0030	0.3382
Nationwide	0.0020	0.0460	0.0020	0.0030	0.0091	0.0040	0.0013	0.5936	0.0012	0.3378
Best Buy	0.6155	0.0008	0.0003	0.0016	0.0033	0.0397	0.0003	0.0007	0.0003	0.3376
United Airlines Holdings	0.0151	0.6176	0.0052	0.0077	0.0019	0.0072	0.0014	0.0023	0.0043	0.3373
Liberty Mutual Insurance Group	0.1033	0.0077	0.0023	0.0208	0.0035	0.3039	0.0824	0.1364	0.0071	0.3325
Dow	0.0106	0.3468	0.0064	0.1199	0.0617	0.0475	0.0050	0.0645	0.0064	0.3312
Tyson Foods	0.0129	0.0728	0.0007	0.0024	0.5651	0.0034	0.0072	0.0032	0.0038	0.3288
TJX	0.0058	0.0032	0.0024	0.0114	0.0063	0.0076	0.0404	0.1583	0.4400	0.3246
TIAA	0.0147	0.1522	0.0030	0.0098	0.0052	0.0048	0.0023	0.4918	0.0044	0.3117
Oracle	0.0079	0.0213	0.0042	0.0021	0.0018	0.0064	0.0129	0.2548	0.3913	0.2972
General Dynamics	0.0085	0.1241	0.0079	0.0063	0.0085	0.0030	0.1471	0.3964	0.0019	0.2962
Deere	0.0016	0.0034	0.0019	0.0029	0.2945	0.0440	0.3507	0.0042	0.0032	0.2937
Nike	0.0131	0.0008	0.0015	0.0004	0.0009	0.0122	0.4656	0.1908	0.0260	0.2886
Progressive	0.0043	0.0086	0.0014	0.0108	0.0084	0.5756	0.0244	0.0773	0.0035	0.2857
Publix Super Markets	0.5751	0.0037	0.0011	0.1174	0.0073	0.0057	0.0032	0.0024	0.0014	0.2826
Coca-Cola	0.1887	0.0086	0.0038	0.0045	0.0216	0.1591	0.0038	0.3186	0.0100	0.2814
Massachusetts Mutual Life Insurance	0.0017	0.0556	0.0012	0.6173	0.0144	0.0273	0.0009	0.0009	0.0030	0.2775
Tech Data	0.0621	0.0047	0.0061	0.0047	0.0084	0.0535	0.0251	0.5596	0.0029	0.2729
World Fuel Services	0.0109	0.6674	0.0012	0.0436	0.0011	0.0006	0.0007	0.0015	0.0012	0.2717
Honeywell International	0.0014	0.0017	0.0011	0.0092	0.2882	0.3859	0.0029	0.0023	0.0434	0.2640
ConocoPhillips	0.0026	0.0029	0.0847	0.0009	0.2332	0.0043	0.3675	0.0411	0.0094	0.2537
USAA	0.0509	0.0056	0.0007	0.6773	0.0062	0.0020	0.0006	0.0029	0.0013	0.2525
Exelon	0.0029	0.0068	0.0008	0.0018	0.0023	0.5613	0.0847	0.1047	0.0018	0.2329
Northrop Grumman	0.0199	0.0017	0.0079	0.5633	0.0185	0.0376	0.0055	0.0952	0.0261	0.2242
Capital One Financial	0.0123	0.0010	0.0340	0.0011	0.3925	0.2396	0.0553	0.0497	0.0017	0.2129
Plains GP Holdings	0.0899	0.0040	0.0022	0.0010	0.6865	0.0018	0.0007	0.0014	0.0025	0.2100

AbbVie	0.0025	0.1049	0.0046	0.0139	0.4621	0.0370	0.0700	0.0098	0.0905	0.2048
StoneX	0.0019	0.0010	0.0013	0.0461	0.0026	0.0139	0.6858	0.0272	0.0193	0.2010

Table D Topic Modelling Results: Global List

company	p_tackling dynamic situation	p_health & safety	p_financial impact	p_economic stability	p_prevention and recovery	p_technology, digitization, automation	p_community orientation	p_global effort	p_frontline battle with pandemic	p_risk & uncertainty aversion
Walmart	0.0356	0.0005	0.0065	0.0054	0.0005	0.0004	0.0003	0.1179	0.0008	0.8323
Sinopec Group	0.0021	0.0342	0.5309	0.0807	0.0035	0.0086	0.0014	0.2357	0.0008	0.1020
State Grid	0.6680	0.0152	0.0115	0.0219	0.0026	0.0019	0.0167	0.1327	0.0792	0.0502
China National Petroleum	0.0199	0.0134	0.0213	0.5787	0.0639	0.0148	0.0018	0.0574	0.1787	0.0502
Royal Dutch Shell	0.0215	0.0196	0.0103	0.0215	0.0215	0.1374	0.0140	0.3243	0.3935	0.0364
Saudi Aramco	0.0401	0.0198	0.1037	0.0069	0.2647	0.2106	0.0089	0.2805	0.0435	0.0214
Volkswagen	0.1011	0.0018	0.0712	0.6648	0.0054	0.0506	0.0026	0.0515	0.0309	0.0200
BP	0.0035	0.0266	0.0166	0.1422	0.0307	0.0045	0.0025	0.3874	0.3673	0.0186
Amazon.com	0.0102	0.0084	0.0049	0.0840	0.0067	0.0111	0.0289	0.3160	0.5116	0.0182
Toyota Motor	0.2856	0.0812	0.0577	0.0151	0.0010	0.0015	0.0369	0.4986	0.0057	0.0167
Exxon Mobil	0.1947	0.0154	0.0019	0.0082	0.0027	0.0027	0.4023	0.3497	0.0057	0.0166
Apple	0.0293	0.0047	0.5257	0.0258	0.0067	0.0021	0.0013	0.3875	0.0012	0.0156
CVS Health	0.0306	0.0224	0.0143	0.0184	0.0184	0.0388	0.1245	0.6347	0.0837	0.0143
Berkshire Hathaway	0.0053	0.0090	0.0445	0.0059	0.0850	0.0115	0.0421	0.7748	0.0103	0.0115
UnitedHealth Group	0.1010	0.0225	0.0099	0.0018	0.0114	0.0023	0.1729	0.6595	0.0073	0.0114
McKesson	0.0148	0.0460	0.0249	0.0148	0.0038	0.2063	0.0038	0.5835	0.0932	0.0089
Glencore	0.0488	0.2553	0.0098	0.1400	0.0033	0.0116	0.0126	0.5056	0.0051	0.0079
China State Construction Engineering	0.0075	0.0075	0.0061	0.0415	0.1925	0.0075	0.0102	0.3422	0.3789	0.0061
Samsung Electronics	0.0042	0.4136	0.0108	0.0155	0.0146	0.0634	0.0108	0.2991	0.1620	0.0061
Daimler	0.0047	0.2008	0.0107	0.0085	0.0041	0.0041	0.0222	0.4671	0.2721	0.0058
Ping An Insurance	0.0049	0.0029	0.1041	0.0386	0.0250	0.0926	0.0072	0.6919	0.0270	0.0056
AT&T	0.0114	0.0081	0.0357	0.1394	0.6836	0.0053	0.0037	0.0997	0.0075	0.0056
AmerisourceBergen	0.0060	0.1181	0.0070	0.0400	0.0070	0.0057	0.0615	0.7106	0.0386	0.0054
Industrial & Commercial Bank of China	0.0054	0.0170	0.0083	0.3332	0.5975	0.0054	0.0032	0.0069	0.0177	0.0054
Total	0.0129	0.0043	0.0072	0.0033	0.0033	0.0043	0.0072	0.1048	0.8474	0.0053
Hon Hai Precision Industry	0.0081	0.0122	0.0284	0.0093	0.0069	0.0051	0.0116	0.9101	0.0033	0.0051
Trafigura Group	0.5073	0.0161	0.0015	0.0049	0.0028	0.0071	0.0049	0.4492	0.0011	0.0049
EXOR Group	0.0059	0.0070	0.1000	0.5096	0.0112	0.0037	0.0027	0.3492	0.0059	0.0048
Alphabet	0.0014	0.0749	0.2010	0.0269	0.0055	0.0285	0.0043	0.6470	0.0055	0.0047
China Construction Bank	0.1598	0.0091	0.0030	0.0047	0.0080	0.0036	0.2789	0.5227	0.0053	0.0047
Ford Motor	0.1053	0.3115	0.0026	0.0021	0.0045	0.0303	0.0604	0.4728	0.0060	0.0045
Cigna	0.0079	0.0024	0.0024	0.0828	0.0986	0.5137	0.0031	0.2718	0.0127	0.0045
Costco Wholesale	0.0044	0.0237	0.1843	0.5412	0.0410	0.0981	0.0054	0.0902	0.0073	0.0044
AXA	0.0029	0.2246	0.0048	0.0042	0.0022	0.0061	0.2125	0.5307	0.0080	0.0042
Agricultural Bank of China	0.0434	0.0160	0.0213	0.0020	0.0524	0.4263	0.0222	0.4070	0.0056	0.0038
Chevron	0.0055	0.0030	0.0354	0.0097	0.1674	0.0083	0.0035	0.6961	0.0673	0.0038
Cardinal Health	0.0253	0.1008	0.0054	0.0311	0.0120	0.0411	0.0228	0.7415	0.0162	0.0037

JPMorgan Chase	0.0056	0.0498	0.0053	0.0270	0.0661	0.0014	0.1160	0.7205	0.0046	0.0037
Honda Motor	0.0338	0.1563	0.0026	0.0040	0.0059	0.0106	0.0102	0.7695	0.0035	0.0035
General Motors	0.0023	0.0235	0.0068	0.3296	0.0241	0.4267	0.0023	0.0408	0.1405	0.0035
Walgreens Boots Alliance	0.0038	0.0152	0.0232	0.1918	0.2009	0.0061	0.0020	0.5166	0.0368	0.0035
Mitsubishi	0.0025	0.0622	0.0011	0.8871	0.0033	0.0011	0.0033	0.0349	0.0011	0.0034
Bank of China	0.0098	0.0031	0.0029	0.0118	0.2983	0.0103	0.0021	0.6279	0.0306	0.0033
Verizon Communications	0.0744	0.0026	0.0546	0.0016	0.0356	0.0265	0.0048	0.6561	0.1405	0.0033
China Life Insurance	0.0054	0.0177	0.0032	0.0239	0.0014	0.0140	0.0522	0.8698	0.0091	0.0032
Allianz	0.0032028	0.0117438	0.0024911	0.0459075	0.0074733	0.011032	0.013879	0.2316726	0.66939503	0.0032028
Microsoft	0.0021	0.0118	0.0037	0.0060	0.3501	0.0053	0.0124	0.5388	0.0667	0.0031
Marathon Petroleum	0.0213	0.1803	0.0017	0.0043	0.0197	0.0014	0.1586	0.6074	0.0025	0.0030
Huawei Investment & Holding	0.0263	0.0594	0.0041	0.0079	0.0067	0.0041	0.2600	0.6098	0.0187	0.0029
China Railway Engineering Group	0.3085	0.1256	0.0023	0.0018	0.0033	0.0053	0.0373	0.4980	0.0153	0.0028
Kroger	0.0017	0.0052	0.0022	0.0726	0.0032	0.1135	0.0087	0.1090	0.6810	0.0027
SAIC Motor	0.0115	0.0725	0.0108	0.0175	0.0115	0.0249	0.1699	0.6026	0.0762	0.0026
Fannie Mae	0.0026	0.0650	0.0044	0.0035	0.0114	0.0546	0.0056	0.8364	0.0139	0.0026
China Railway Construction	0.0869	0.1662	0.1249	0.0111	0.0014	0.0845	0.0190	0.4542	0.0493	0.0026
Gazprom	0.0077	0.0090	0.0044	0.2674	0.6305	0.0100	0.0031	0.0579	0.0077	0.0024
BMW Group	0.0023	0.0248	0.0054	0.0038	0.0120	0.0023	0.1077	0.8043	0.0350	0.0023
Lukoil	0.0129	0.0069	0.0061	0.0131	0.0480	0.5068	0.0134	0.3876	0.0028	0.0023
Bank of America	0.0053	0.0606	0.0012	0.0281	0.0035	0.1733	0.0067	0.7130	0.0063	0.0021
Home Depot	0.1913	0.0101	0.0039	0.0020	0.0028	0.0044	0.3729	0.3921	0.0184	0.0020
Japan Post Holdings	0.7594	0.0097	0.0028	0.0035	0.0020	0.0020	0.0339	0.1697	0.0149	0.0020
Phillips 66	0.0032	0.0635	0.0024	0.0037	0.2866	0.0058	0.0723	0.5547	0.0058	0.0019
Nippon Telegraph and Telephone	0.0045	0.0668	0.0012	0.0012	0.0052	0.0146	0.0018	0.2109	0.6920	0.0018
Comcast	0.0006	0.0080	0.3056	0.0319	0.0306	0.0040	0.0020	0.6094	0.0061	0.0018
China National Offshore Oil	0.0026	0.0058	0.3921	0.0405	0.0042	0.0054	0.0013	0.5455	0.0007	0.0017
China Mobile Communications	0.0046	0.0259	0.0046	0.0351	0.0620	0.0124	0.0057	0.4791	0.3687	0.0017
Assicurazioni Generali	0.4664	0.0757	0.0017	0.0017	0.0051	0.0153	0.0504	0.3803	0.0017	0.0017
Crédit Agricole	0.0126	0.0080	0.5689	0.0356	0.0022	0.0241	0.0013	0.3411	0.0045	0.0017
Anthem	0.0126	0.0558	0.0074	0.1556	0.0064	0.0387	0.0316	0.6829	0.0074	0.0017
Wells Fargo	0.0054	0.0787	0.0017	0.0527	0.0017	0.0078	0.0064	0.2158	0.6281	0.0017
Citigroup	0.0020	0.0106	0.0098	0.6326	0.0848	0.1046	0.0011	0.1138	0.0391	0.0015
Valero Energy	0.9553	0.0260	0.0015	0.0026	0.0009	0.0007	0.0036	0.0042	0.0036	0.0015
Itochu	0.0032	0.0577	0.0073	0.0227	0.0054	0.0021	0.0426	0.4630	0.3946	0.0013
HSBC Holdings	0.0032	0.0025	0.0139	0.2143	0.5815	0.0109	0.0074	0.0135	0.1514	0.0013
Siemens	0.0014	0.0009	0.0901	0.7985	0.0018	0.0090	0.0010	0.0814	0.0146	0.0013
Pacific Construction Group	0.0395	0.0056	0.0026	0.0485	0.1687	0.1407	0.0210	0.5355	0.0365	0.0013
Rosneft Oil	0.2908	0.0087	0.0609	0.0151	0.0073	0.0048	0.0652	0.5416	0.0044	0.0012
General Electric	0.0017	0.0245	0.0424	0.0044	0.1282	0.0082	0.0044	0.7829	0.0019	0.0012

China Communications Construction	0.0074693	0.0237458	0.49665549	0.0021182	0.0027871	0.0043478	0.0759197	0.38338909	0.0023411	0.0012263
China Resources	0.0011866	0.14983819	0.4790723	0.0011866	0.0007551	0.0096009	0.0454153	0.31100321	0.0007551	0.0011866
Prudential	0.0052392	0.0430524	0.0020501	0.0047836	0.201139	0.0084282	0.0029613	0.6981777	0.0330296	0.001139
Dell Technologies	0.0420186	0.0478883	0.0033644	0.0173944	0.0027917	0.003078	0.1682892	0.68554038	0.0285612	0.0010737
Nestlé	0.0093001	0.0048897	0.0025887	0.0018217	0.0023969	0.0048897	0.0016299	0.5241611	0.4472675	0.0010547
Nissan Motor	0.0063063	0.0089397	0.0071379	0.0009009	0.0512128	0.0143451	0.1966043	0.66562718	0.0478863	0.0010395
Hyundai Motor	0.0024623	0.003892	0.0018268	0.0540905	0.0029388	0.0013503	0.0013503	0.1816521	0.74940431	0.0010326
Legal & General Group	0.0074744	0.002439	0.0008655	0.0326515	0.0054288	0.54689223	0.004642	0.36892211	0.0296617	0.0010228
Deutsche Telekom	0.0040788	0.1140647	0.0009845	0.0032349	0.0009845	0.0012658	0.56919831	0.30421939	0.0009845	0.0009845
Enel	0.0126887	0.0661263	0.002739	0.0038569	0.0013974	0.44611511	0.0382895	0.42520961	0.002739	0.0008385
Aviva	0.023888	0.0034596	0.0686985	0.0054366	0.0018122	0.47924221	0.0037891	0.40906101	0.0037891	0.0008237
China FAW Group	0.0291371	0.0033503	0.1377665	0.0086294	0.0122843	0.0271066	0.0122843	0.76477158	0.0039594	0.0007107
China Post Group	0.0030126	0.0094266	0.0012634	0.0350826	0.0080661	0.57677358	0.0067055	0.35753161	0.0014577	0.0006803
Amer International Group	0.0088	0.0356308	0.0118769	0.0016615	0.13901541	0.1669538	0.0111385	0.62307692	0.0011692	0.0006769
China Minmetals	0.0019426	0.0494912	0.0302498	0.56327468	0.0037928	0.0171138	0.0056429	0.30832559	0.019519	0.0006475
Banco Santander	0.0248966	0.0157982	0.0015715	0.0267163	0.0010753	0.0950372	0.0027295	0.23598009	0.59561622	0.000579
SoftBank Group	0.0201619	0.0015385	0.0012146	0.0013765	0.0025101	0.0008907	0.72315788	0.245749	0.002834	0.0005668
Bosch Group	0.0039582	0.11882	0.0021658	0.34884241	0.0023152	0.1132935	0.0178491	0.3415235	0.0507095	0.0005228
Reliance Industries	0.0073028	0.0012658	0.0006816	0.0221032	0.0008763	0.0049659	0.0024343	0.2429406	0.71694261	0.0004869
SK Holdings	0.0018994	0.0195614	0.000372	0.0005287	0.0022518	0.0132172	0.68641078	0.27489719	0.0004112	0.0004504
Carrefour	0.0002935	0.99484283	0.0003774	0.0005451	0.0002096	0.0003774	0.0004612	0.0023061	0.0002096	0.0003774
BNP Paribas	0.0003836	0.99621922	0.0007123	0.0003836	0.000274	0.000274	0.0003836	0.0008219	0.000274	0.000274
Dongfeng Motor	0.5221141	0.0270234	0.0019018	0.0003096	0.0008403	0.0009288	0.0193277	0.4255197	0.0018134	0.0002211