

## Work, leisure, and the Monday Blue: Does culture matter?

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### Abstract

This paper finds that national culture differences can explain the variation in the cross-country day-of-the-week (DOW) effect. More specifically, countries with lower individualism and higher power distance index tend to have a stronger DOW effect. We argue that in countries with lower individualism and higher power distance index, the distinction between weekend leisure and weekday work is more prominent, leading to more pessimistic feelings on Mondays, and subsequently to a stronger DOW effect. Our results support the Monday Blue hypothesis.

*Keywords:* Monday Blue hypothesis; culture; day-of-the-week effect

*JEL Classification Codes:* G00, G14, G15

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### 1. Introduction

The Day-of-the-Week (DOW effect hereinafter) effect refers to the systematically lower Monday returns, higher Friday returns, or both, and there has been a long list of literature explaining the cause of the DOW effect (see Abraham, Ikenberry, 1994, Ariel 1990, and Baker, et. Al, 2014, Chatzitzisi, et al 2021, among others). Our paper contributes to the literature by exploring the relationship between culture and the DOW effect and finds that cross-country culture elements can explain the variation of degrees of the DOW effect from different countries. More specifically, we use Hofstede's (1980) culture dimensions and find that countries with lower individualism or higher power distance index tend to have higher DOW effects. Along with the accumulating literature on culture and the financial markets (e.g, Chui et al, 2010, Eun et al, 2015, Singh et al, 2017, Gorodnichenko and Roland 2017, etc.), as far as we know, this is the first paper in the literature that links the DOW effect and the cultural elements.

Our findings support the Monday Blue hypothesis in the literature that explains the DOW effect. The psychological literature reveals that people are in a happy mood on Fridays and in a bad mood on Mondays (Farber, 1953, Croft and Walker, 2001; Larsen and Kasimatis, 1990; Reis et al., 2000). Following this line of research, the Monday Blue hypothesis proposed by Rystrom and Benson (1989), Jacobs and Levi (1988), etc., suggests that a greater proportion of

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investors tends to be pessimistic on Mondays than on other weekdays, which makes them less willing to buy and/or more willing to sell shares on Mondays compared to other days, therefore explaining the DOW effect. We further argue that people expect more leisure time during weekends, and they are obliged to work during weekdays. Biesheuvel (1984) mentions that the consumption of energy per se is not unpleasant (e.g., gymnastics, hunting, jogging, etc.). Beukman (2005) quotes Biesheuvel (1984) and argues that one important difference between leisure and work is that the “activities of leisure are an expression of what people want to do and not what they have to do”(page 75). The key difference between work and leisure is the flexibility that people can do what they wanted to do, rather than being assigned to some job at the workplace. Therefore, we argue that the degree of the DOW effect depends on people’s attitude gap between their weekend leisure and weekday work, and the attitude gap varies across different cultures. In a country where employees have a high degree of flexibility in their weekday work, they are more likely to enjoy working more since work is more consistent with their interests. Therefore, the emotional difference between weekend leisure and weekday work is relatively small. In comparison to that, in a country where employees have a low degree of flexibility in their daily job, the work is something that the employees have to do for a living, rather than something they like to do. The employees are therefore expecting the weekend leisure more enthusiastically, and they want more eagerly to stay away, both emotionally and physically, from the weekday work. To summarize, in a culture where the working environment is more flexible, the Monday Blue is weaker, and we expect a lower degree of the DOW effect.

In the four cultural dimensions documented in Hofstede (1980), and Hofstede and Hofstede (2005), we argue that two of them are directly linked to work flexibility and the emotional gap between labor and leisure: Individualism and Power-distance Index (PDI). Individualism can be defined as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families. Its opposite, collectivism, represents a preference for a tightly-knit framework in society in which individuals can expect their relatives or members of a particular ingroup to look after them in exchange for unquestioning loyalty. In individualistic countries, employees’ company does recognize their particular interests and skills and tries to use that information when placing them in their jobs. In collectivist countries, employees are assigned job contents, and flexibility is minimal. To rank the flexibility of doing what people want to do, leisure > individualism work > collectivism work. The difference between work and leisure is more prominent in collectivist countries. Therefore, the Monday Blue effect, and consequently the DOW effect would be stronger for collectivist countries than for individualistic countries.

Similarly, in organizations with high power distance, employees acknowledge their lesser standing, and are respectful and submissive towards their superiors; who in turn, are more likely to give orders rather than consult with their employees while making decisions. Employers would not have meals together with their subordinates and might have private facilities such as rooms, elevators, etc. In businesses with low power distance, bosses would be more open to employee discussion and participation. Employees are less submissive to their superiors and are more likely to make themselves heard or to challenge the management. In large-power-distance countries, people have less power and have to follow instructions from their superiors, and have less freedom. Therefore, the DOW effect is stronger in large-power-distance countries.

We consider that the other cultural dimensions are not directly linked to the emotional gap between labor and leisure. Masculinity (MAS) represents a preference in society for achievement, heroism, assertiveness, and material rewards for success. Its opposite, Femininity, stands for a preference for cooperation, modesty, caring for the weak and quality of life. However, there is no clear connection between masculinity and work flexibility. Similarly, the Uncertainty Avoidance (UAI) dimension expresses the degree to which the members of a society feel

uncomfortable with uncertainty and ambiguity. Countries exhibiting strong UAI maintain rigid codes of belief and behavior, and are intolerant of unorthodox behavior and ideas. Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles. Again, there is no clear connection between masculinity and work flexibility.

In the remaining part of the paper, we check the four culture dimensions, and the empirical evidence highly supports the Monday Blue hypothesis: In countries with low degrees of individualism and high power distance, the DOW effect is stronger (since employees have lower degrees of flexibility in work and the Monday Blue is stronger). The results are robust over different settings.

## 2. Data and empirical analysis

### 2.1. Data

The culture data used in this paper are from Hofstede and Hofstete (2005). The stock index data used in this paper are from Bloomberg. Our sample contains 52 markets' benchmark indices. and the sample period is from January 1, 1982 (or the earliest record in the Bloomberg, whichever is later), till December 31, 2014. The indices used in the sample, the starting date in Bloomberg, as well as the daily continuously compounded returns are listed in Appendix A of this paper. We also obtain the individual stock data from Datastream.

### 2.2. The existence of the DOW effect

We now test whether the DOW effect exists in the sample countries. We adopt the following regression:

$$r_{it} = \alpha_i + \beta_{i2}Tue_t + \beta_{i3}Wed_t + \beta_{i4}Thu_t + \beta_{i5}Fri_t + \varepsilon_{it} \quad (1)$$

where  $r_{it}$  is the continuous compounded daily return of market  $i$  on date  $t$ .  $Tue_t$  is a dummy variable which equals 1 if date  $t$  is a Tuesday and 0 otherwise.  $Wed_t$  is a dummy variable which equals 1 if date  $t$  is a Wednesday and 0 otherwise.  $Thu_t$  is a dummy variable which equals 1 if date  $t$  is a Thursday and 0 otherwise.  $Fri_t$  is a dummy variable which equals 1 if date  $t$  is a Friday and 0 otherwise.  $\varepsilon_{it}$  is the error term. Therefore, the coefficient of  $Fri_t$  captures the difference between Friday returns and Monday returns.  $\beta_{i5}$  is therefore our measure of DOW effect. A positive and significant  $\beta_{i5}$  implies that the Friday returns are significantly higher than the Monday returns. The results are shown in Table 1. We first run the regression for each country, and obtain the  $\beta_{i5}$  for each country  $i$ . The mean effect for the 52 markets is 11.8 basis points, which is significant at 1% level, indicating that the DOW effect does exist on average. Of all the 52 countries, 45 have a positive DOW effect, and 26 of them are significant for the whole sample period. While some research (e.g. Bampinas, Fountas and Panagiotidis 2016, etc.) fails to find consistent evidence of the DOW effect, we provide supportive evidence, and it counteracts the EMH: Even after it has been unrevealed for a long time, the DOW effect vanishes little despite that traders/speculators may want to take advantage of it. Explaining the reasons for the DOW effect is therefore a meaningful task for both the academia and the industry.

### 2.3. The DOW effect the cultural dimensions

In this section, we test whether the degrees of different cultural dimensions have any impact on the DOW effects. For each market  $i$ , we first run the above regression (1) again, and then, define the day-of-the-week effect of market  $i$  as  $dow_i = \hat{\beta}_{i5}$ , which is the difference between Friday returns and Monday returns. Next, we run the following regression:

$$DOW_i = \gamma + \theta Culture_i + v_i \quad (2)$$

Table 1. The existence of the DOW effect.

This table shows the regression results. For each market  $i$ , we run the following regression

$$r_{it} = \alpha_i + \beta_{i2}Tue_t + \beta_{i3}Wed_t + \beta_{i4}Thu_t + \beta_{i5}Fri_t + \varepsilon_{it}$$

where  $r_{it}$  is the continuous compounded daily return of market  $i$  on date  $t$ .  $Tue_t$  is a dummy variable which equals 1 if date  $t$  is a Tuesday and 0 otherwise.  $Wed_t$  is a dummy variable which equals 1 if date  $t$  is a Wednesday and 0 otherwise.  $Thu_t$  is a dummy variable which equals 1 if date  $t$  is a Thursday and 0 otherwise.  $Fri_t$  is a dummy variable which equals 1 if date  $t$  is a Friday and 0 otherwise.  $\varepsilon_{it}$  is the error term.

**Panel A: Summary statistics**

	Mean value (%)	# of obs	# Positive	# Positive and significant
$\beta_{i5}$	0.118*** [7.07]	52	45	26

Note: t-values are shown in brackets. \*, \*\* and \*\*\* represent significance level of 10%, 5%, and 1%, respectively.

**Panel B: Market-by-market statistics**

country	$\beta_{i5}$	t-value	p-value	country	$\beta_{i5}$	t-value	p-value
Argentina	0.0029	3.18	0.001	Malaysia	0.0021	3.73	0.000
Australia	-0.0001	-0.35	0.730	Mexico	0.0014	2.03	0.042
Austria	0.0003	0.52	0.606	Netherlands	0.0004	0.74	0.459
Belgium	0.0003	0.67	0.505	New Zealand	-0.0010	-2.32	0.020
Brazil	0.0023	2.31	0.021	Norway	0.0009	1.38	0.169
Bulgaria	0.0019	2.19	0.029	Pakistan	0.0023	3.23	0.001
Canada	0.0011	3.17	0.002	Peru	0.0022	3.29	0.001
Chile	0.0023	6.97	0.000	Philippines	0.0018	2.96	0.003
China	0.0020	2.29	0.022	Poland	-0.0012	-1.45	0.146
Columbia	0.0033	4.15	0.000	Portugal	0.0006	1.22	0.221
Croatia	0.0017	2.24	0.025	Romania	0.0014	1.57	0.117
Czech	-0.0003	-0.51	0.608	Russia	-0.0003	-0.25	0.803
Denmark	0.0006	1.22	0.223	Saudi Arabia	0.0013	1.81	0.071
Estonia	0.0010	1.35	0.176	Singapore	0.0017	2.74	0.006
Finland	0.0009	1.48	0.139	Slovakia	0.0005	0.85	0.396
France	0.0011	2.00	0.045	Slovenia	0.0020	3.09	0.002
Germany	0.0006	1.20	0.231	South Africa	-0.0008	-1.44	0.149
Greece	0.0027	3.62	0.000	Spain	0.0008	1.59	0.112
Hong Kong	0.0018	3.02	0.003	Sweden	0.0005	0.96	0.338
Hungary	-0.0006	-0.92	0.357	Switzerland	0.0005	1.18	0.237
India	0.0006	1.04	0.297	Taiwan	0.0004	0.85	0.397
Indonesia	0.0018	3.31	0.001	Thailand	0.0043	6.57	0.000
Ireland	0.0013	2.56	0.011	Turkey	0.0035	3.37	0.001
Italy	0.0006	0.75	0.454	U.K.	0.0011	2.78	0.006
Japan	0.0007	1.51	0.132	U.S.A.	0.0001	0.23	0.821
Korea	0.0002	0.31	0.758	Venezuela	0.0040	5.09	0.000

where  $Culture_i$  are the culture measures, including individualism (IDV), power distance index (PDI), muscularity (MAS), and uncertainty avoidance index (UAI). The null hypothesis is: the cultural measures have no impact on the country-wide DOW effect. The results are shown in Table 2 and Figure 1.

The results of Table 2 show that the coefficient of individualism (IDV) is significantly negative, and that of power distance index (PDI) is significantly positive<sup>1</sup>. The coefficients for MAS and UAI are insignificant. The results indicate that the cross-country culture difference can explain the variation of DOW effect. More specifically, countries with higher degrees of individualism tend to have lower DOW effects, while countries with higher power distance index tend to have higher DOW effects. The scatter plots in Figure 1 document consistent results with those from Table 2. These results support the Monday Blue hypothesis that the

<sup>1</sup> We also use a GARCH(1,1) model and find highly consistent results.

Figure 1. Scatter plot of DOW and culture.

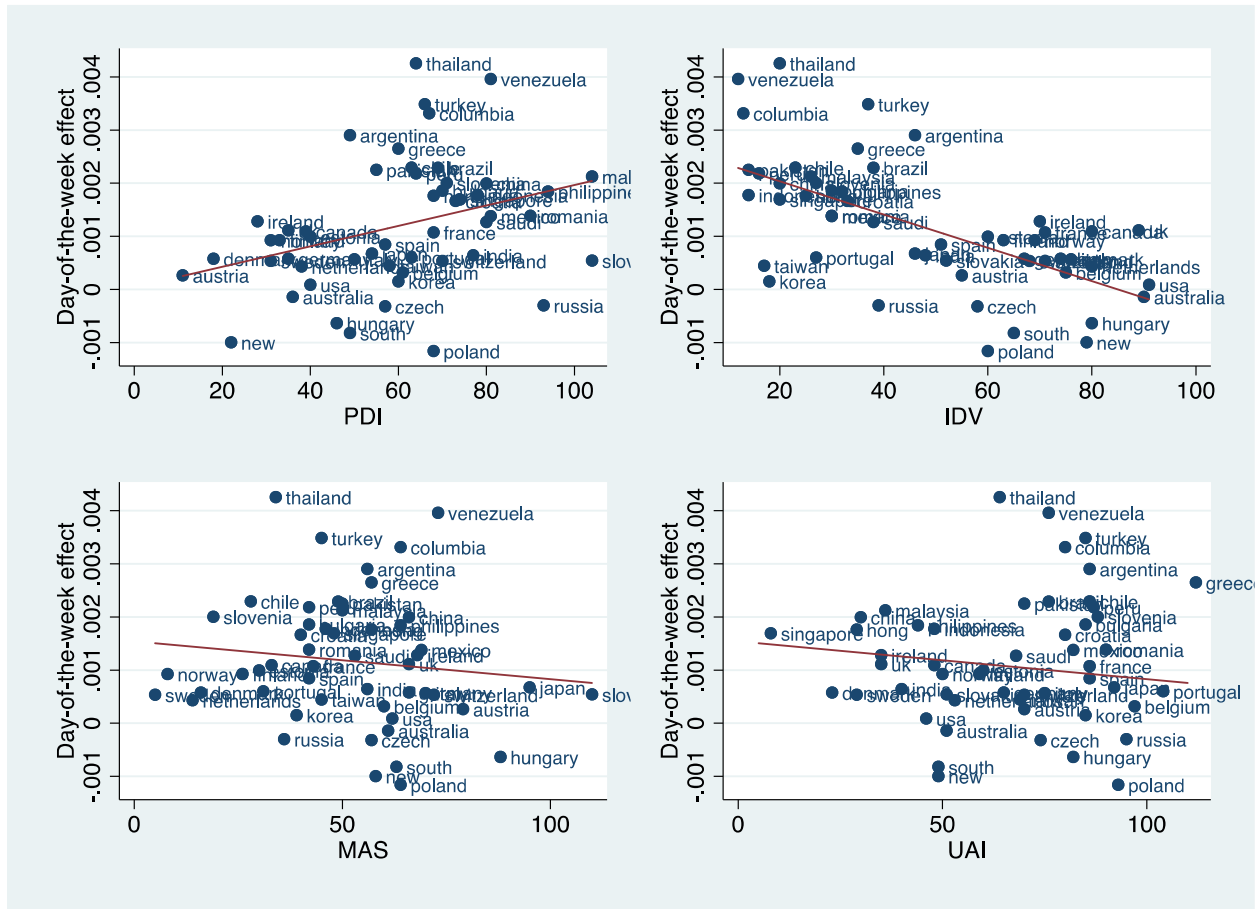


Table 2. DOW and culture.

This table shows the regression results. For each market  $i$ , we run the following regression

$$r_{it} = \alpha_i + \beta_{i2}Tue_t + \beta_{i3}Wed_t + \beta_{i4}Thu_t + \beta_{i5}Fri_t + \varepsilon_{it} \tag{1}$$

where  $r_{it}$  is the continuous compounded daily return of market  $i$  on date  $t$ .  $Mon_t$  is a dummy variable which equals 1 if date  $t$  is a Monday and 0 otherwise.  $Fri_t$  is a dummy variable which equals 1 if date  $t$  is a Friday and 0 otherwise.  $\varepsilon_{it}$  is the error term. Then, define the day-of-the-week effect of market  $i$  as  $dow_i = \beta_{i5}$ , which is the difference between Friday return and the next Monday return. Then we run the following regression:

$$DOW_i = \gamma + \theta Culture_i + v_i \tag{2}$$

where  $Culture_i$  are the culture measures, including individualism (IDV), power distance index (PDI), muscularity (MAS), and UAI.

$DOW_i$	(1)	(2)	(3)	(4)
<i>IDV</i>	-0.0000313*** [-5.85]			
<i>PDI</i>		0.0000192*** [3.14]		
<i>MAS</i>			-0.00000709 [-1.07]	
<i>UAI</i>				0.00000429 [0.69]
<i>Constants</i>	0.00266*** [8.35]	0.000041 [0.12]	0.00154*** [4.34]	0.000894** [2.30]
<i>No. of obs</i>	52	52	52	52
<i>F-values</i>	34.17	9.852	1.145	0.48
<i>p-value</i>	0.000	0.028	0.290	0.492

Note: \*, \*\* and \*\*\* represent significance levels of 10%, 5%, and 1%, respectively. t-values are shown in brackets.

DOW effect is stronger in countries with the less flexible working environment (i.e., low IDV, high PDI countries), due to the fact that those less flexible working environments make a greater distinction between weekday work and weekend leisure, and the Monday Blue effect is stronger<sup>2</sup>.

#### 2.4. The DOW effect and the $R^2$

One further testable hypothesis about the Monday Blue effect is from the perspective of price synchronicity. Gondhalekar and Mehdiian (2003) argue that concurrent mood among investors such as the Monday Blues could be one such risk that is systematic (i.e., affecting the cross section of stocks simultaneously), but is not a market risk (i.e., not fully captured by the variation in the market return). If the Monday Blues are a source of non-diversifiable risk, the proportion of non-diversifiable risk would be higher on Mondays and lower on Non-Mondays. Table 3 reports the results of:

(1) The comparison between  $R_{i,Monday}^2$  and  $R_{i,Non-Monday}^2$

(2) The relationship between  $gap_{iR}$  and culture measures.

More specifically, we first run the following regressions:

$$r_{it \in Mondays} = \beta_0 + \beta_1 r_{mt} + \varepsilon_{it} \quad (3)$$

$$r_{it \in Non-Mondays} = \gamma_0 + \gamma_1 r_{mt} + \nu_{it} \quad (4)$$

where  $r_{it \in Mondays}$  is the continuously compounded daily return for index  $i$  on date  $t$ , if  $t$  is a Monday.  $r_{it \in Non-Mondays}$  is the continuously compounded daily return for index  $i$  on date  $t$ , if  $t$  is not a Monday.  $r_{mt}$  is the continuously compounded daily return on Datastream's world market index on date  $t$ . We define  $R_{i,Monday}^2$  as the adjusted  $R^2$  of model (3), and  $R_{i,Non-Monday}^2$  as the adjusted  $R^2$  of model (4). Then further define country  $i$ 's price synchronicity difference between Mondays and Non-Mondays as:  $gap_{iR} = R_{i,Monday}^2 - R_{i,Non-Monday}^2$ .

Then we run the following regression:

$$gap_{iR} = \theta_0 + \theta_1 Culture_i + u_i \quad (5)$$

where  $Culture_i$  are the culture measures: individualism (IDV) and power distance index (PDI).

Panel A of Table 3 shows that, the  $R_{i,Monday}^2$  is significantly higher than  $R_{i,Non-Monday}^2$ . The mean  $R_{i,Monday}^2$  is 43.55%, while the mean  $R_{i,Non-Monday}^2$  is 35.57%, and the test for equality is rejected at 1%. Similarly, the median  $R_{i,Monday}^2$  is 24.67%, while the median  $R_{i,Non-Monday}^2$  is 22.72%. The difference is also significant at 1%. The results of Panel A, Table 3 further support Gondhalekar and Mehdiian (2003)'s results.

Panel B of Table 3 shows the channels how culture impacts the price synchronicity. Specifications (1) and (2) show that the gap of  $R_i^2$  between Mondays and Non-Mondays is lower for high individualism and higher for high power distance countries, which makes perfect sense in supporting the blue Monday hypothesis. In specifications (3) and (4), UAI and MAS

<sup>2</sup> In order to test the robustness of the results, we follow a referee's comment and conduct the test for the following model and find out highly consistent results: :

$r_{ijt} = \alpha + \beta_2 Tue_t + \beta_3 Wed_t + \beta_4 Thu_t + \beta_5 Fri_t + \gamma Culture_i + \theta Fri_t * Culture_i + \delta' Control_{it} + \varepsilon_{ijt}$   
where  $r_{ijt}$  is the continuous compounded daily return of market  $i$  on date  $t$ .  $Tue_t$  (Wed, Thu, Fri) is a dummy variable which equals 1 if date  $t$  is a Tuesday (Wednesday, Thursday, Friday) and 0 otherwise.  $\varepsilon_{ijt}$  is the error term.  $Culture_i$  are the culture measures.  $Control_{it}$  are the control variables, including GDP, population, Control of corruption, Rule of law, Regulatory quality, Government effectiveness, Political stability, Voice and accountability. The model is estimated using PCSE, and the results are available upon request.

do not have any impact on the gap of  $R_i^2$  between Mondays and Non-Mondays. The results are highly consistent with previous ones.

Table 3. Monday Blues, price synchronicity, and culture.

We run the following regressions:

$$r_{it \in Mondays} = \beta_0 + \beta_1 r_{mt} + \varepsilon_{it} \tag{3}$$

$$r_{it \in Non-Mondays} = \gamma_0 + \gamma_1 r_{mt} + v_{it} \tag{4}$$

where  $r_{ijt \in Mondays}$  is the continuously compounded daily return for market  $i$ , stock  $j$  on date  $t$ , if  $t$  is a Monday.  $r_{ijt \in Non-Mondays}$  is the continuously compounded daily return for market  $i$ , stock  $j$  on date  $t$ , if  $t$  is not a Monday.  $mr_{it}$  is the continuously compounded daily return on market  $i$ 's benchmark index on date  $t$ . We define  $R_{i,Monday}^2$  as the equally weighted adjusted  $R^2$  of model (Eq.3) for all stocks in market  $i$ , and  $R_{i,Non-Monday}^2$  as the equally weighted adjusted  $R^2$  of model (Eq.4) for all stocks in market  $i$ . Then further define country  $i$ 's price synchronicity difference between Mondays and Non-Mondays as:  $gap_{iR} = R_{i,Monday}^2 - R_{i,Non-Monday}^2$ .

Then we run the following regression:

$$gap_{iR} = \theta_0 + \theta_1 Culture_i + u_i \tag{5}$$

where  $Culture_i$  are the culture measures: individualism (IDV) and power distance index (PDI).

**Panel A: Comparison of  $R^2$ .**

$R^2$	Mondays	Non-Mondays	t-value
Mean	0.4355	0.3557	-4.11***
Median	0.2467	0.2272	-3.97***

Note: \*, \*\* and \*\*\* represent significance levels of 10%, 5%, and 1%, respectively.

**Panel B: Regression.**

$gap_{iR}$	(1)	(2)	(3)	(4)
IDV	-0.000197** [-2.42]			
PDI		0.000233** [2.11]		
MAS			-0.0000193 [-0.28]	
UAI				-0.0000831 [-0.90]
Constants	0.0182*** [3.16]	-0.00537 [-0.99]	0.00894** [2.33]	0.0133** [2.03]
No. of obs	38	38	38	38
F-values	5.856	4.433	0.0799	0.815
p-values	0.019	0.045	0.772	0.374

Note: \*, \*\* and \*\*\* represent significance levels of 10%, 5%, and 1%, respectively. t-values are shown in brackets.

### 3. Conclusion

This paper studies the relationship between country-wide culture measures and the DOW effect. We use four culture measures from Hofstede and Hofstede (2005): individualism, power distance, masculinity, and uncertainty avoidance. We find that the DOW effect is stronger in countries with low individualism and high power distance index. But masculinity and uncertainty avoidance seem to have no impact on the DOW effect. Our results support the Blue Monday hypothesis of the DOW effect: investors feel sad on Mondays and feel happy on Fridays since they like the weekend leisure and dislike the weekday work. However, in countries with high individualism and low power distance index, employees have higher flexibility in work and the difference between weekend leisure and weekday work is not strong, therefore the DOW effect is weaker. Our results are robust over different specifications.

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### References

- Abraham, A., and Ikenberry, D. (1994) The individual investor and the weekend effect, *Journal of Financial and Quantitative Analysis* **29**, 263-277
- Ariel, R. (1990) High stock returns before holidays: Existence and evidence on possible causes, *Journal of Finance* **45**, 1611-1626
- Baker, A., Siganos, A., Evangelos, A., and Vagenas-Nanos, E. (2014) Does mood explain the Monday effect? *Journal of Forecasting*, **33** (6): 409-418
- Bampinas, G., Fountas, S., and Panagiotidis, T. (2016). The day-of-the-week effect is weak: Evidence from the European real estate sector. *Journal of Economics and Finance*, 40(3), 549-567.
- Beukman, T. L. (2005) *Culture, values and work-related values: A theoretical overview, Chapter 3*. University of Pretoria etd
- Biesheuvel, S. (1984) *Work Motivation and Compensation. Volume 1: Motivational Aspect*. Johannesburg: McGraw–Hill Book Company.
- Chatzitzisi, E., Fountas, S., and Panagiotidis, T. (2021). Another look at calendar anomalies. *The Quarterly Review of Economics and Finance*, 80, 823-840.
- Chui, A., Titman, S., and Wei, J. (2010) Individualism and momentum around the world, *Journal of Finance* **65** (1) 361-392.
- Croft G.P., Walker, A.E. (2001) Are the Monday blues ail in the mind? The role of expectancy in the subjective experience of mood, *Journal of Applied Social Psychology* **31**, 1133–1145.
- Eun, C.S., Wang, L., and Xiao, S. (2015) Culture and R2, *Journal of Financial Economics* **115** (2) 283-303.
- Gondhalekar, V. and Mehdiian, S. (2003) The blue-Monday hypothesis: Evidence based on Nasdaq stocks, 1971-2000, *Quarterly Journal of Business and Economics* **42** 73-89
- Gorodnichenko, Y. and Roland, G. (2017) Culture, institutions, and the wealth of nations, *Review of Economics and Statistics* **99** (3) 402–416.
- Hofstede, G. (1980) *Culture's consequences: International differences in work-related values* Beverly Hills, Sage Publications, London
- Hofstede, G. and Hofstede, G. J. (2005) *Cultures and Organizations: Software of the Mind (Rev. 2nd ed.)* New York: McGraw-Hill.
- Jacobs, B., and Levy, K. (1998) Calendar Anomalies: Abnormal returns at calendar turning points, *Financial Analysts Journal* (November/December 1998), pp. 28-39
- Larsen, R.J. and Kasimatis, M. (1990) Individual differences in entrainment of mood to the weekly calendar, *Journal of Personality and Social Psychology* **58** 164-71
- Reis, H.T., Sheldon, K.M., Gable, S.L., Roscoe, J., and Ryan, R.M. (2000) Daily well-being: the role of autonomy, competence, and relatedness, *Personality and Social Psychology Bulletin* **26** 419–435.
- Ryström, D. and Benson, E. (1989) Investor psychology and the day-of-the-week effect, *Financial Analysts Journal* September/October 75-78.
- Singh, V., Li, B. and Roca, E. (2017) How pervasive is the effect of culture on stock market linkages? Evidence across regions and economic cycles, *Applied Economics*, 49 (42), 4209-4230.



## Appendix A - Information about the International Market Indices

This table contains the information about the benchmark indices for all countries used in the paper. It reports (1) the name, (2) the starting date from Bloomberg, and (3) the mean daily return.

<i>Country</i>	<i>Index Name</i>	<i>Starting date in Bloomberg (YYYYMMDD)</i>	<i>Mean daily return (%)</i>
<i>Argentina</i>	BURCAP	19930104	0.074
<i>Australia</i>	ASX200	19920601	0.020
<i>Austria</i>	AUSTRIA TRADED IDX	19860601	0.016
<i>Bahrain</i>	BHSEASI	20060610	0.020
<i>Belgium</i>	BEL20	19910102	0.084
<i>Brazil</i>	BOVESPA	19880321	0.047
<i>Bulgaria</i>	SOFIX	20001025	0.024
<i>Canada</i>	TSE COMP	19300203	-0.002
<i>Chile</i>	GENERAL IGPA	19900103	0.051
<i>China</i>	SHANGHAI COMP	19901220	0.032
<i>Columbia</i>	COLCAP	20020617	0.078
<i>Croatia</i>	CROBEX	20020618	0.012
<i>Czech</i>	PRAGUE SE	19940407	-0.001
<i>Denmark</i>	OMX 20	19900610	0.031
<i>Egypt</i>	HERMES	19930318	0.066
<i>England</i>	FTSE100	19840103	0.033
<i>Estonia</i>	TALLINN	19960604	0.048
<i>Finland</i>	HELSINKI	19870105	0.029
<i>France</i>	CAC 40	19870710	0.015
<i>Germany</i>	DAX	19591002	0.036
<i>Greece</i>	ASE INDEX	19870105	0.027
<i>Hong Kong</i>	HANGSENG	19640831	0.043
<i>Hungary</i>	BUX	19910103	0.047
<i>India</i>	SENSEX	19790404	0.063
<i>Indonesia</i>	JAKARTA COMP	19830405	0.049
<i>Ireland</i>	ISEQ	19830112	0.039
<i>Italy</i>	FTSE MIB	19980102	-0.006
<i>Japan</i>	TOPIX	19490517	0.011
<i>Jordan</i>	AMMAN SE	20000102	0.022
<i>Korea</i>	KOSPI	19800105	0.040
<i>Lebanon</i>	BLOM	19960123	-0.006
<i>Lithuania</i>	OMX VILNIUS	20000105	0.011
<i>Malaysia</i>	FTSE EMAS	19960102	0.022
<i>Mexico</i>	IPC	19940120	0.040
<i>Netherlands</i>	AMSTERDAM	19951005	0.019
<i>New Zealand</i>	NZX15 GROSS	20011002	0.038
<i>Nigeria</i>	NIGERIA IDX	19980105	0.042
<i>Norway</i>	OBX BENCHMARK	19960103	0.036
<i>Pakistan</i>	KSE100	19911105	0.063
<i>Peru</i>	GENERAL BVL	19900103	0.170
<i>Philippines</i>	PSEI	19870105	0.040
<i>Poland</i>	WIG20	19940607	0.016
<i>Portugal</i>	PSI20	19930104	0.009
<i>Qatar</i>	DSM INDEX	19980811	0.054
<i>Romania</i>	BET INDEX	19970923	0.051
<i>Russia</i>	RTS STANDARD	19950904	0.115
<i>Saudi Arabia</i>	TADAWUL	19940130	0.032
<i>Singapore</i>	STRAITS TIME	19990901	0.011
<i>Slovakia</i>	SLOVAKIA SHARE	19930922	0.010
<i>Slovenia</i>	SBITOP	20030402	0.012
<i>South Africa</i>	FTSE JSE	19950703	0.048
<i>Spain</i>	IBEX35	19870107	0.022

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<i>Sweden</i>	OMX30	19861219	0.035
<i>Switzerland</i>	SWITZERLAND IDX	19880704	0.027
<i>Taiwan</i>	TAIEX	19670106	0.032
<i>Thailand</i>	THAILAND SET	19870703	0.023
<i>Tunisia</i>	TUNIS	19990414	0.044
<i>Turkey</i>	ISTANBUL100	19880105	0.140
<i>Ukraine</i>	PFTS INDEX	19980113	0.033
<i>United States</i>	S&P500	19300103	0.037
<i>Venezuela</i>	CARACAS INDEX	19940103	0.163

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